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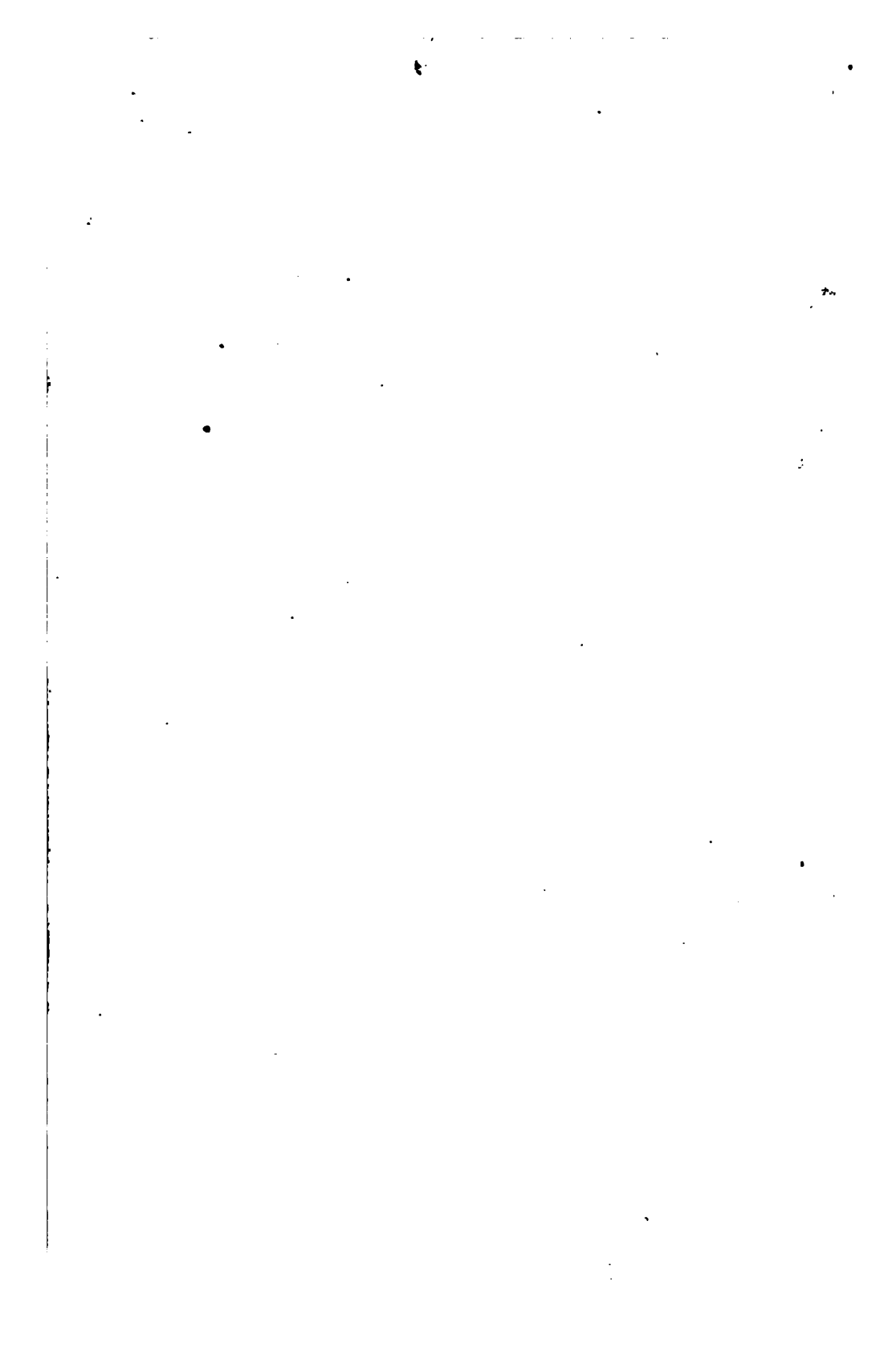
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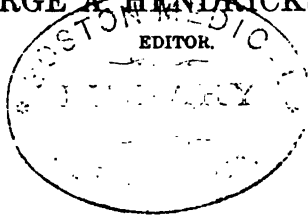


THE
PHYSICIAN AND SURGEON

A MONTHLY MAGAZINE,

DEVOTED TO MEDICAL AND SURGICAL SCIENCE.

GEORGE A. HENDRICKS, M. D.,



VOLUME VI.

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PHYSICIAN AND SURGEON

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VOLUME VI. JANUARY, 1884. NUMBER I.

ORIGINAL ARTICLES.

EXCISION OF THE LEFT SUPERIOR MAXILLA: REPARATIVE DENTISTRY.

BY O. C. JENKINS, D. D. S., ANN ARBOR, MICHIGAN.

Mrs. Mary F., age thirty-seven, residence Ann Arbor, Michigan; admitted to University hospital February 8, 1882. Six or seven months before she observed a small lump, no larger than a kernel of corn on the left side of the nose midway between the ala and the inner third of the eye. This had rapidly developed until it closed the eye of that side and projected from the cheek, forming a tumor nearly as large as one's fist. The case was carefully examined by Professor Donald Maclean on February 13, and excision of the left superior maxillary pronounced imperative. On February 18, the patient was anæsthetized, and beginning at the internal canthus an incision was made along the side of the nose downwards to the mouth. Another lateral incision beginning at the same initial point was carried across the prominence of the malar bone to the root of the zygomatic process. The morbid growth was then rapidly and fully exposed. The anterior face of the antrum and a portion of the floor of the orbit were found to be invaded, being softened and somewhat broken down. The morbid growth was then separated from the healthy bone by means of a dental-engine saw and the bone forceps; and on the conclusion of this the whole of the left superior maxillary and a triangular segment of the right (the right central incisor being removed with it), had been

excised. The wound united by the first intention and when the patient was discharged on March 4, the cicatrices were almost imperceptible.

April 8: No return of the tumor; the finger can be passed up to the floor of the orbit and can be seen when pushed behind the anterior nares.

On July 31, 1882, the patient consulted me, and figure one



FIGURE ONE.

represents her condition. It will be seen that all the upper teeth on the left side, including the right central incisor and also the maxillary bone up to, and including part of, the floor of the orbit had been removed. The patient complained that since the operation phonation has been very imperfect, and that when drinking, fluids would run back into the cup—through the nostrils—unless the head was thrown well back. After a thorough examination of the case, I proceeded to take an impression, although the difficulties seemed well-nigh insuperable. The requirements were both physiological and æsthetic. I was to restore the impaired functions of mastication, deglutition and phonation, and also, as far as possible, to overcome the facial deformity. I was to supply a symmetrical cheek, to afford a hard palate, to protect the excavated orbit, and to effectively antagonize the teeth. The difficulties are shown in the wood-cut made from the cast (figure two), where a good representation of the bucal and nasal cavities are seen.

The impression was made of wax and plaster and taken in two sections. The wax was carried into the cavity as far as the floor of the orbit, and also into the nasal cavity, thus making a partial roof for the mouth. This was kept in place by an assistant, while I applied plaster, in a large impression cup, firmly against the wax and the muscles of the cheek, retaining all until the plaster had set. The wax had hardened, and the plaster adhered to it so firmly, that the entire cast was removed in one piece—much to my delight.

Before making a model, I began at the top of the wax and trimmed out the center of it down to the plaster in order to secure an artificial maxillary of proper weight, and form. In

After a thorough examination of the case, I proceeded to take an impression, although the difficulties seemed well-

nigh insuperable. The requirements were both physiological and æsthetic. I was to restore the impaired functions of mastication, deglutition and phonation, and also, as far as possible, to overcome the facial deformity. I was to supply a symmetrical cheek, to afford a hard palate, to protect the excavated orbit, and to effectively antagonize the teeth. The difficulties are shown in the wood-cut made from the cast (figure two), where a good representation of the bucal and nasal cavities are seen.



FIGURE TWO.

grinding and articulating the teeth, I proceeded as one would do with an ordinary vulcanite plate. Figure two shows that there is a new roof to the mouth, (the remaining portion of the hard palate being used for its suction), and a new jaw and cheek bone on the left side.



FIGURE THREE.

Figure three shows the patient's appearance after using the artificial substitute for one year and a half. She wears the apparatus with ease and comfort. She can now thoroughly masticate all food; can drink without regurgitation, and articulates distinctly. Her case, which was desperate in the extreme, and, without the operation, would soon have terminated fatally, is another illustration of the results of modern operative surgery. The relief of her annoying and embarrassing condition, that existed after the operation, is only one of the many triumphs of reparative dentistry.

PACKING-HOUSE WOUNDS.*

BY WILLIAM L. AXFORD, M. D., CHICAGO, ILLINOIS.

One of the most interesting and important topics which engages the attention of the surgeon of to-day, is the best method to secure primary union in wounds which admit of the possibility of such union.

This evening I purpose bringing before the society a class of incised wounds, which, though cleanly cut, by reason of their peculiarities do not admit of primary union so far as my experience goes; I refer to the wounds made by the knives used in the large packing-houses here in Chicago.

I have been particularly struck by the execrable manner in which these wounds heal, and by the bad consequences following very slight wounds, such as small incisions which would under ordinary circumstances unite by the first intention, even were no treatment given them.

As to location, these wounds have without exception been cuts on the hand or forearm, varying in depth from mere scratches on the skin to wounds involving the periosteum and bone.

* Read before the Chicago Medical Society, December 17, 1883.

According to my observations the amount of after-trouble has been directly proportionate to the depth of the wound. When the skin has been cut through and the cellular tissue opened, an intense cellulitis, terminating in the formation of large quantities of pus and requiring free incisions, has been the almost invariable result. From a small cut on the back of the hand a cellulitis extending halfway up the forearm is not an uncommon result, and an inflammation extending to the elbow has been seen. If the sheath of a tendon be opened or a tendon cut, sloughing is the usual termination. If the wound extend deeper and the periosteum be cut, I believe that in nearly every case periostitis with necrosis of the bone will follow.

The cause must of course be the septic material conveyed into the wound from knives used daily in cutting meat, which probably are rarely cleaned with care and never disinfected, though they are ground and washed daily. I am informed by the surgeon to one of the large packing-houses, with whom these wounds are a daily occurrence, that he has learned to expect the worst consequences in wounds made by the knives used by the "shavers," that is, those employed in removing the finer hair from the bodies of the animals after they have passed through the scraping machines.

As to treatment, these wounds seem to resist antiseptic measures and to pursue much the same course as if no treatment were adopted. In dressing these wounds carbolic acid, solutions of eucalyptol, and iodoform have been tried, the edges being neatly approximated with sutures if necessary, still union by the first intention has never occurred in my practice and I despair of obtaining it. The bi-chloride of mercury, which seems to be the most powerful of all antiseptics has not been tried in these cases but, from the failure of other agents to modify their course in any degree, it does not seem that much can be expected from it.

Since such intense inflammations so commonly follow these wounds, it seems to me that it would be the better plan to put aside the idea of securing union by the first intention which is, to say the least, problematical, and direct our measures towards preventing the inflammatory consequences by arresting the spread of septic material through the tissues; in other words, treat these cuts from the first as poisoned wounds. To this end, if the cut be seen immediately, a thorough application of the actual cautery would be the best means of destroying the septic material. This may seem a heroic measure but I am firmly convinced that the actual amount of inconvenience to the patient so far as time and suffering go, would be diminished.

The injection of antiseptics, such as carbolic acid, corrosive sublimate, ethereal solutions of iodoform, and tincture of iodine

into the tissues about the wound would be a very efficient adjunct to the treatment by the cautery in fresh wounds, or perhaps might take the place of the cautery entirely.

If some time had elapsed since the injury it would be advisable to dispense with the cautery and trust to the injections, surrounding the wound by a larger circle than in the recent cases.

A CASE OF SYPHILIS TREATED HYPODERMICALLY.

BY A. D. HARD, M. D., PHILADELPHIA, PENNSYLVANIA.

December 3, I was called to see Fannie W., age twenty-four, who was suffering from an eruption of the skin fairly characteristic of the non-ulcerative tubercular syphilide. Small indurated blotches of a reddish inflammatory appearance, some not larger than the end of a lead pencil, others three-quarters of an inch in diameter, covered her face, arms and legs, with a few upon her back and sides. They caused her but very little pain but seemed to be inflammatory in other respects. There was no exfoliation of epithelium which afforded me a fortunate differential diagnostic point between this and psoriasis which it very much resembled in other respects, especially in the thickening of the skin over the joints. The patient gave a history of an initial-lesion occurring some two and a half years previous, which was excised and cauterized by a celebrated surgeon of this city; she subsequently remained free from any manifestation up to about seven weeks since when these blotches began to appear and gave her annoyance in her vocation as a prostitute.

I diagnosed the case as before stated, and as she was very anxious to be speedily rid of the eruption and willing to pay well for time saved I decided to resort to subcutaneous medication, which was carried out in the following manner: Commencing in the scapular region I gave hypodermic injections daily of one twenty-fifth of a grain of bi-chloride of mercury dissolved in twenty minims of ordinary water, increasing this dose gradually until one-twelfth was reached. The points of puncture were touched, just previous to inserting the needle, by a small stick dipped in strong carbolic acid; this turned the skin ashy white, destroying the cutaneous nerves and rendering the introduction of the needle perfectly painless. The spot was well rinsed immediately afterward to remove the acid and prevent blistering. On the eighth day the patient complained of a slight tenderness of the teeth and looseness of the bowels. I obviated these conditions by giving her one-eighth of a grain of morphia with one-sixtieth of a grain of atropia two days in place of the bi-chloride and then resumed the mercury which gave no further trouble. The tubercles fast vanished and on

the sixteenth day after giving the first injection she was almost free from them, only a few light ones remaining on her legs. I then discontinued the injections and put her upon the following pill:

R. Massa hydrarg.,..... ʒiij.
 Quin. sulph.,
 Ferri sulph.,..... aa ʒjss.
 Ext. opii aq., ... ʒss.

M. Make into one hundred pills. Sig. Take one pill half an hour after each meal.

She was instructed to report at my office once a month for the next two years under penalty of a return of the disease in an even worse form than the one just recovered from. There were no abscesses formed during the treatment and the patient highly appreciated the very rapid disappearance of the eruption which she had been informed by a homeopath would take years to remove if it could be done at all.

A very pleasant feature of the case was the painless introduction of the hypodermic needle.

GENERAL CORRESPONDENCE.

IN RE ANTISEPTIC OVARIOTOMY.

TO THE EDITOR OF THE PHYSICIAN AND SURGEON: *Sir*—Apart from all controversy (which I *hate*), and in the interest of scientific surgery (which I *love*), permit me to state the following interesting and relevant case.

On the 27th of December I removed, in this city, a compound ovarian tumour, nearly forty pounds weight, from a young lady aged nineteen years. The operation was performed in a small and crowded house, located on a narrow side street of decidedly suspicious aspect, *hygienically* or antiseptically speaking. The operating room, about ten feet broad by twelve long, communicated directly with the street in the one direction and the kitchen in the other. Ten medical friends, besides two female relatives of the patient, witnessed the operation. In short the room was packed full.

An extensive parietal adhesion occasioned persistent oozing so that the peritoneal cavity was unavoidably kept open for fifty-five minutes. An omental adhesion necessitated the application of several ligatures and the snipping off of several tags of lacerated omentum. Carbolic acid, in the proportion of one part to twenty of hot water, was used to cleanse the hands, the instruments and the sponges. *No spray*. The anesthetic was Squibb's chloroform.

With the exception of the usual inability to urinate and a slight degree of nausea, the progress of the case from the date

of operation down to the present time, has been entirely uneventful and in every respect gratifying.

One starch and laudanum enema, and one hypodermic injection of a quarter of a grain of morphia, constituted the sum totum of medication applied, and these might very well have been omitted.

The wound healed by first intention. The temperature never rose to 101°; the pulse rarely exceeded 100; tympanitis was conspicuous by its absence; the bowels moved on the fourth day and have continued to move regularly and naturally ever since; the sutures were all removed on the fifth day; the patient sat up in an easy chair on the sixth day, and on the eighth day I considered her as *dismissed cured*.

Finally, this is not, by any means, an exceptional result in my experience.

Yours, etc.,

DONALD MACLEAN.

72 LAFAYETTE AVENUE, DETROIT.

ORIGINAL TRANSLATIONS.

Translations from German Journals for THE PHYSICIAN AND SURGEON.
BY CONRAD GEORG. M. D., ANN ARBOR, MICHIGAN.

TURPENTINE IN DIPHTHERIA.

Dr. Satlow (*Jahrbuch für Kinderheilkunde*) reports a remarkable success with turpentine in cases of diphtheria occurring during a severe epidemic of the disease. Of forty-three cases, eight adults and thirty-five children, in which the severity of the symptoms and the extensive formation of the membranes excluded all doubt of the nature and gravity of the disease, he lost only one patient, a sickly boy of five years, who died on the sixteenth day of the disease from paralysis of the heart, after all general and local symptoms had subsided. Dr. S. remarks particularly that of the forty-three cases enumerated, only those of unquestionable character are included, cases characterized by the generally observed constitutional and local symptoms, the membranes extending beyond the tonsils and accompanied by great swelling of the submaxillary glands. All doubtful cases of angina are excluded from the list, else it would be very different. The diphtheritic complications of scarlet fever are also excluded, because the question of identity of the latter variety with the ordinary form of the disease is still unsettled. In these cases, moreover, the action of the turpentine seemed quite indifferent as to the course and duration of the disease.

In twelve of the forty-two cases cured, the following complications occurred: In three cases the membrane involved the

larynx; the nasal passages were likewise attacked in three cases; continuous albuminuria was observed in one case; temporary albuminuria in six cases; hæmaturia occurred for two days in one case, a delicate woman age twenty-six, after the administration of the second tablespoonful of the oil; paralysis in four cases; temporary paralytic disturbances of the soft palate, nasal language, difficulty of swallowing, etc., were frequently observed.

Strangury, without the presence of albumen in the urine, was a frequently observed symptom of temporary duration.

Dr. S. considers the kidney complications as partly the result of medication, and believes that if the oil was withheld on the first appearance of symptoms of irritation, the complication might possibly be avoided to some extent. The only treatment instituted for the kidney complications consisted in a temporary suspension of the use of turpentine.

Of the other complications, those of the larynx are of particular interest. In two of them, well nourished boys of nine and ten years, cases in which a cure of laryngeal diphtheria may also be witnessed without a resort to tracheotomy, yet the ease and rapidity with which it occurred under the use of turpentine was quite remarkable. In his third case, a sickly ænemic boy of four years, the author does not regard it probable that recovery would have taken place so readily without the turpentine. In this case the oil was first used on the third day of the disease when the membranes had involved the tonsils and entire fauces and the submaxillary glands were greatly swollen and very foetid breath. During the next day the membranes became loosened and the general and local symptoms improved. Strangury supervening the oil was suspended. During the fifth and sixth day improvement continued; the membranes had now become greatly reduced in extent and considerably thinned; the temperature was now almost normal. On the evening of the sixth day, hoarseness and croupy cough ensued; on the seventh day the laryngeal symptoms had become very severe, the voice was completely lost and the breathing had become very difficult and labored; the fever had reappeared in severer intensity than at the outset of the disease. During this day two teaspoonful doses of the oil were again given, when a severe albuminuria and strangury forbade further use of oil. Tracheotomy, as the only alternative, seemed evident and without much hope on account of the intense kidney complication, when contrary to all expectation, the fever abated and the breathing became less labored and the general condition improved. The improvement henceforth continued without interruption, and on the eighth day of the laryngeal complication the voice returned and two days later the albuminuria disappeared and re-convalescence was now steady and uninterrupted by further complications.

Dr. S. prefers the freshly distilled oil. For adults in tablespoonful doses twice daily, for children of five years a teaspoonful, for older children a desertspoonful, and a proportionate dose for younger children twice in twenty-four hours. Milk or wine is given freely with the oil. Small doses of the oil are not only useless but are in general not so well borne as large doses. In children the entire quantity used was on an average fifteen grams, in adults from twenty-five to thirty grams. In individual cases where the oil was frequently withheld on account of kidney complications, the entire quantity used was somewhat larger. Indications for withholding the oil beside those of general and local improvement, consist in the appearance of symptoms of strangury and severe albuminuria, on the subsidence of which, when further indicated, the oil is again administered. The immediate effects of the oil consist in slight burning sensation in the throat, and depression in region of stomach, followed by eructations tasting and smelling strongly of turpentine. Vomiting is not unfrequently observed, less often, however, when sulphate of æther in proportions of one to fifteen grams of oil is added. The author now prefers the æther and turpentine mixture. Within a few hours after its administration one or more dark-brown or greenish evacuations occur smelling strongly of the oil. A large part of the oil is thus excreted and these evacuations are more profuse and more rapidly observed after larger than after smaller doses. To this fact the author attributes both the greater tolerance and better effect of larger doses than smaller ones. The urine has an intense violet odor which continues for a long time after the suspension of the oil; it can be kept for days in an open vessel without becoming turbid, and it can be kept for weeks without undergoing decomposition. This is an evidence of the intense disinfectant qualities of the oil of turpentine. On heating the urine the violet odor is gradually displaced by that of turpentine.

The first effect of the oil on the diphtheritic process is the disappearance of the characteristic fetid odor, which does not reappear even in the gangrenous forms of the disease; within a day or two the membranes become swollen and loosened, later they can be readily detached. Underneath them is generally observed a semi-transparent veil-like coating, which becomes gradually more transparent and finally disappears entirely. The inflammation of the throat subsides coincidently with the swelling of the membranes, swallowing becomes less difficult, the swollen submaxillary glands become softened and less painful. In severer forms of the disease it is the exception that these symptoms of improvement are noticed on the second day after the use of the oil, generally they are observed on the third or fourth day of turpentine medication. At times the membranes are rapidly removed to be quickly followed by a second and even a third coating; in these cases the treatment

with the oil is likewise a protracted one. The fever does not differ materially in its course from that usually observed in diphtheria. It is generally most severe during the onset, abates rapidly and disappears often at a time when the diphtheritic process is still at its height.

The general symptoms, the headache, backache, pain in the extremities, the heavy feeling of general disease, loss of appetite, etc., subside rapidly, and the impression obtains that a grave constitutional disease has been converted into a lighter local affection.

These improvements are most markedly observed in those doubtful cases which are classified by some physicians as catarrhal diphtheria and held identical as regards their etiological character with genuine diphtheria, by others regarded as angina fibrinosa or pseudo diphtheria and classified with the severer forms of tonsillitis with exudates. In these doubtful cases, which the author remarks particularly as excluded from his list of forty-three genuine cases, he administers the oil, even when the exudate is less marked, yet the submaxillary glands swollen and the general symptoms indicate severe constitutional disease. In these cases the effect of the oil is simply extraordinary, often a small dose is sufficient to allay the general and local symptoms within a few hours.

Turpentine was first recommended in diphtheria by an American physician some ten years ago, further recommended by Dr. Bosse in *Berlin Klin. Wochenschrift*, who reports a number of very grave cases as cured by the oil alone. Dr. Robert Koch, the discoverer of the bacillus of tuberculosis found in his investigations of the bacillus of gangrene of the spleen (Melzbrandt) that turpentine even in a solution of 1:75000 prevented the development of this bacillus, and further that turpentine and æther are the only disinfectants found capable of preventing the development of this form of bacteria. Should diphtheria depend upon one of these micro-organisms as its cause, the dose of the oil ten grams for an adult of seventy-five kilograms, is as 1 to 7500, that is, ten times stronger than the percentage established by Koch for the prevention of the bacillus of splenic fever. Certainly no other antizymotic can with safety be administered in such a percentage of the weight of the body.

The ordinary methods of treatment were not neglected in the authors forty-three cases. Cold applications to the neck; sponging or wet pads for reduction of temperature; gargling or sponging the throat with solutions of chlorate of potash, tincture ferri or lime water; internal use of tincture ferri in small doses, and particularly when turpentine was withheld on account of strangury or albuminuria; nourishing non-stimulating diet. Wine was administered from the beginning and in not too small quantities.

Translations from German Journals for THE PHYSICIAN AND SURGEON.
BY W. F. HAKE, M. D., GRAND RAPIDS, MICHIGAN.

KAIRIN: THE NEW REMEDY.

Kairin was discovered by Dr. O. Fischer, of Müncher University. Its antipyretic action was first investigated and the dose for the adult established by Dr. Filchne, who published the results of his experiments in the *Berl. Klin. Woch.* Number XVI, 1883. A very able paper, and probably the best one contributed, is by Lucino and Brüning. Dr. Knipping reports very good results where quinia sulphatis proved to be of no benefit. In the case upon which he made this trial test, the temperature was 41.5° centigrade. In an article by Dr. Janssen, of Holland, there is published the report of twenty-six cases in which the remedy was used. These cases included pneumonia (asthenial form), pleuritis, typhoid fever and phthisis. Kairin was not tried in any case until the disease had existed several days, that is, not until there was an established high temperature. Drs. Ewald and Guttman have made reports of cases; the latter gave it in the treatment of forty-two patients, and reports very favorably.

In some of the cases where it was used by Dr. Janssen, the temperature was 40.5° centigrade, and in typhoid cases as high as 41.9° centigrade. The temperature was always taken in the axilla. Dr. Janssen found that when Kairin was given in 0.25 gram doses, no benefit was derived; but received good results when the dose was increased to .5 gram repeated every hour until 1.5 grams were given. In one case of this method of administering the remedy, the temperature was reduced from 40° centigrade to 37° centigrade.

Kairin does not reduce the normal temperature, and in pneumonia when given in .5 gram doses no reduction was observed; in phthisis, however, the result was easily accomplished. In one phthisical patient, a middle aged lady, who had been affected with the disease for one year, and who was being rapidly reduced through the hectic fever, by the administration of two or three doses, the heat was reduced from an evening temperature of 39°-39.5° centigrade to 37.5° centigrade. In typhoid cases, to receive any marked effects, kairin had to be given in .75 gram doses, which were repeated hourly until four or five doses of the drug were given. In pneumonia the temperature was reduced only 1.5° centigrade, after the hourly administration of 1. gram doses.

Its action is transient and must be given in repeated doses to have manifest results. According to the observations of Guttman, upon suspending the administration of the remedy the temperature rose again, and became even higher than before its use. But the results of different observers are contradic-

tory; Dr. Janssen claims that in his cases the former high temperature did not return on the discontinuance of the drug, Drs. Filchne and Guttman state that the effect of kairin is produced and can be maintained for some time when small repeated doses are given (one-third to one-fourth gram), Dr. Janssen could not get the effects of the drug from doses so small, except in phthisis. In cases of pneumonia more or less sweating accompanied the reduction of the fever; this sweating was not marked in phthisical patients. The pulse is lowered to the normal, or nearly so. The urine is not effected by small doses, but by giving three to four grams, the urine becomes greenish in color.

Dr. Janssen comes to the following conclusions:

- (1) That kairin acts with powerful energy in the reduction of temperature.
- (2) That this action is not reached in all cases.
- (3) That its action is brief.
- (4) That kairin can be used without any disagreeable symptoms, ringing noises in the ear, headache, vomiting or dangerous effects.

Translations from French Journals for THE PHYSICIAN AND SURGEON.

BY F. B. FLORENTINE, M. D., SAGINAW CITY, MICHIGAN.

A URETHRAL CALCULUS SIMULATING A STRICTURE.

An army officer, age thirty-seven, who never had venereal diseases, experienced, in December, 1865, pains starting from his loins and ending in the perineum and testicles, with painful micturition. At the end of eighteen or twenty days, after passing a few small calculi, all difficulties ceased, under the influence of unctions of belladonna, and warm baths. Four years later, he suffered a second attack; but it was very mild and of short duration. In 1879, he again felt pains in his back and lower portion of the abdomen, with frequent and difficult micturition. Dr. Dominguez, military surgeon, approved the belladonna ointment and warm baths, but refused to give his opinion as to the nature of the case without first using the catheter. The patient refused, but in a few days was suddenly seized with very acute pains in all the lower portion of his body, especially in the perineum, with great difficulty of voiding urine. A physician was consulted, who, after using the catheter, declared there existed an organic stricture that would necessitate the use of sounds as well as diuretics; but in spite of their use the patient kept getting worse, and at the end of ten months, Dr. Dominguez was again called. At this moment the situation of the patient was grave; micturition was almost continuous and very scanty, accompanied with excruciating pains and total insomnia; troubled urine, leaving a sediment

analogous to that of decomposed broth; a hard pad or lump of about a quarter of an inch in diameter, was felt under the urethra, corresponding with the bulbous portion of said organ. Febrile movements redoubling at night. In spite of the patient's resistance, the sound, number six French, was introduced with great difficulty, every other day, for a few days, but orchitis supervened, and in consequence, the use of the sound was suspended. After the subsidence of the orchitis the sound was again resorted to, but it was accidentally noticed when it was withdrawn somewhat forcibly it would be scratched on one side. A stricture, however organized, as it might be, could hardly give rise to such a phenomenon; it must necessarily be a hard, rough, substance in order to scratch a metallic sound, in that manner. Instead of trying to remove the gravel by means of the "boutonniere" we tried to dislodge it with the sound and fingers combined. The next day we found the calculus so far displaced as to enable us to reach and seize it with Hunter's forceps. After the gravel was extracted, all difficulties naturally ceased, and the officer cheerfully resumed his duties.—E. C. Siglo *et Gaz. de Montpellier*.

CLINICAL LECTURES.

ABSTRACT OF REMARKS ON STRICTURE OF URETHRA: ITS RESULTS AND TREATMENT.

BY DONALD MACLEAN, M. D.,
Professor of Surgery in the University of Michigan.

The patient has been before you several times, but there are so many interesting features in the case that I wish to call your attention to it again.

History read as follows: Mr. T. A. G., age forty-four years, Cadillac, Michigan; occupation, ———; admitted to the hospital October 22. Ten weeks previous to his admittance he fell from a flight of stairs, severely bruising the structures of the perineum. The injury was immediately followed with pain and swelling, the urethra became occluded, and the urine retained. The local physician was successful in introducing a catheter on his first, but was not able to do so on succeeding visits. When the immediate effects of the injury began to pass away and the swelling became reduced, the urine was noticed to be constantly dribbling away. He was confined to his room for three weeks. When able to walk around he could, to some extent, control the flow of urine, but had no control over it when lying down. General health much impaired and his whole system rapidly breaking down.

I saw him for the first time October 24, and immediately discovered a firm round tumor in the pubic region, caused by a greatly distended bladder, and upon introducing a catheter drew off a large quantity of fetid urine.

Before the urine began to dribble away and relieve the greatly distended bladder, the patient's life was in extreme peril. It was only a matter of chance, whether the bladder ruptured, the urine flooding the peritoneal cavity, causing almost immediate death from shock and collapse, or if the seat of injury suppurated, allowing the urine to escape into the surrounding tissues.

The manner in which the bladder was relieved in this case, was the most fortunate termination that could be expected. It became more and more distended until the involuntary muscular fibers of the sphincter became paralyzed, and the urine then escaped through its natural channel. But the muscular fibers of the entire organ were paralyzed as well, thus it became a passive receptacle for the accumulation of the urine, with more power to empty itself, and when emptied by means of a catheter, it would fill up again and become as greatly distended as before.

When nature is left to itself to work a cure it does not always pursue the best way of getting out of trouble. When a stricture is tight enough to cause retention of the urine, abscess and fistula in perineo result not directly from ulceration of the mucous membrane of the urethra, but by irritation of a sympathetic character in the cellular tissue outside of the urethra. This goes on to suppuration, the abscess opens on the surface, and then the urethra gives way and the condition of fistula in perineo is established.

These fistulæ usually open on the perineal surface, but they may extend down on the thigh. Before the fistula is formed, or if the sinus is not adequate to admit of a free discharge of the urine, all the structures behind the stricture are distended; the bladder becomes dilated or sacculated; its mucous membrane is irritated by the fetid urine, which keeps up a constant desire to pass water. The kidneys may become involved, and uræmic poisoning result. This was doubtless the condition of this case, for he was attacked with chills, and exhibited other symptoms of blood poisoning.

It is important to have some estimate of the amount of injury that is done to the urethra. In this case we know that there was no laceration of the mucous membrane. When the urethra is torn a catheter cannot be readily passed.

It is in this class of cases that the surgeon wants more than one way of relieving the difficulty. There are three safe and effectual methods of relieving a distended bladder when a catheter cannot be passed. The simplest and safest is by means of the aspirator. The firm, round tumor, is readily felt above the

pubes, into which the needle can be thrust and the accumulated fluid easily drawn off. When the instrument is at hand this is much the safest, as the slender needle can be repeatedly inserted without the slightest danger. The next simplest mode, is introducing a curved trochar and canula through the anterior wall of the rectum into the base of the bladder. The third is to cut in the median line of the body through the structures of the perineum, and open through the prostatic portion of the urethra the same as in the operation of median lithotomy.

None of these measures were resorted to in this case. The bladder was allowed to distend to its utmost capacity; all its muscular structure became paralyzed, the sphincters passively yielded to the pressure, and the urine escaped through the urethra.

In those cases where the bladder ruptures and the urine extravasates into the surrounding tissues, free incisions should be made to permit the urine to drain away. Even this may not prevent diffuse suppuration and death of the tissues involved. In this class of cases, there is no limit to the amount of injury that may be produced.

The attending physician failing to pass a catheter after his first visit, and the injury that was done by his subsequent efforts teaches a very practical lesson. It is a very simple thing to introduce a full sized instrument through a normal urethra; but when this passage becomes injured or closely constricted, it is then one of the most delicate operation that the surgeon can perform. Everything depends upon the skill, experience, and patience of the surgeon. The manipulation cannot be obtained through study, nor by seeing it done. It must be gained by experience which should begin in the dissecting room. That is the place to become familiar with the structures that are in relation to the urethra, and the natural curve and direction of the passage. There is no disgrace in the failure to pass a catheter through a ruptured urethra or a sound through a tight stricture. When every measure has been exhausted, send the patient away, allow the parts a day's rest, during this interval give alkaline drinks, warm hip baths, and an injection of some anodyne or an opium suppository. With the irritable parts thus soothed and relaxed make another attempt. It must be done by skill, and can never be accomplished by force. Remember that it will require less force to produce a false passage, than to pass through a firm stricture. In making the manipulation let the point be carried in different directions. The channel may make a sudden turn, and unless the instrument be tried in various directions it will not pass.

Strictures are now divided into *membranous* and *indurated*. The obstruction in the membranous variety may be due to valve-like circular folds, which partially close the canal, while in the indurated it is due to the deposit of inflammatory pro-

ducts in the cellular tissue surrounding the mucous membrane, or in the muscular coat of the urethra, or both. An old classification which produced much controversy, divided strictures into *permeable* and *impermeable*. This was a very illogical division, as these terms are only relative. A stricture that is permeable to one surgeon may be impermeable to another, who possesses less skill and patience. An instrument can be made to pass through any stricture that allows the urine to escape. Neither theoretically nor clinically is there such a condition as impermeable stricture. The urethra must be either permeable or completely occluded; when this latter condition exists there is obliteration of the natural membranes of the passage. Although it may be the ultimate outcome of a stricture, it is an entirely different condition and requires a treatment altogether different from that for stricture.

Stricture is an affection that often exists only in the imagination. Previous disease or injury makes the patient apprehensive; this anxiety and watchfulness soon cause him to believe that he is really suffering with the condition which he has so anxiously anticipated. Do not accept the statement of any patient that he has a stricture. If a stricture exists a part or all of the following train of symptoms can be elicited in the history. Pain is felt in the groin, about the hips, in the testicles and in the back. An early symptom is urethral discharge; more or less trouble is experienced in the expulsion of the contents of the bladder. The stream is diminished, and may be flat, twisted or forked. The force and velocity is lessened. These conditions of the stream are increased as the stricture becomes tighter. Sometimes there is great delay, the patient being compelled to stand some minutes before the urine begins to flow. In bad cases the straining efforts made to empty the bladder keeps that organ, as well as the penis, in a congested condition. From the fact that the bladder is seldom completely emptied, the retained urine undergoes fermentation, becoming ammoniacal and fetid. This may produce inflammation of the parts behind the stricture, causing swelling, and complete closure of the urethra. The urine thus retained distends the bladder to such a degree that the sphincters become paralyzed or inactive, then, as in this case, there is a constant dribbling, which renders the patient unfitted for any place in society or business, a burden to himself and an offense to all around him.

Let me repeat that the surgeon cannot make his diagnosis upon any statement of the patient or any set of symptoms; these will aid, but the diagnosis must be confirmed by the passage of proper instruments. For this purpose a full sized instrument should be used, not with the expectation of passing it, but for the purpose of determining that there is a stricture. The objections to a small instrument are that it may pass the

narrowed portion of the urethra and fail to show its presence, or the slender extremity may catch in a fold of the mucous membrane, and the resistance thus produced, be falsely attributed to a stricture.

In the treatment only two indications are presented: to dilate the constricted part and restore the urethra to its normal size; and, to prevent the tissues from again contracting. There are four methods for obtaining the results indicated. The one employed the most frequently is *dilatation*: this may be *gradual*, when the instruments are passed every third or fourth day, and is regarded the safest of all methods; or dilatation may be *rapid*, when the instruments are introduced in quick succession, doing virtually the same thing in a few minutes, that by the gradual would require many days.

Divulsion is the name of another measure, which ruptures the tissues involved. This operation is made with an instrument especially designed for the purpose, of which there are various modifications.

Internal Urethrotomy, is a very old procedure; in this operation the tissues are divided by a knife making a clean incision, instead of the rough tear of divulsion. With the aid of the ingenious instruments that are now used for the purpose, the operation is quite a simple one.

External Urethrotomy, an operation that was strongly recommended by Professor Syme, of Edinboro, is one that rarely need be resorted to, where it is possible to pass a sound. It consists in passing an instrument into the urethra, as far as the stricture, then cutting through the perineal tissues, and dividing the tract of the urethra from this point into the bladder.

In this case we will continue to pass instruments. His urine will be drawn off, and before the catheter is withdrawn give the bladder a thorough washing, and then inject a solution of nitrate of silver, one grain to the ounce. He will be given ergot and iron for the paralysis of the bladder. With this treatment I am confident we will be able to present him again in a short time greatly improved.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

CHRONIC PERIOSTITIS OF TIBIA: FREE INCISION; CURE.

R. P. O., farmer, aged thirty-two, was admitted on October 19, 1883. The patient had always enjoyed good health until six years ago when he contracted syphilis. He took treatment for this, but did not have a complete cure. Never noticed any of the present pain prior to his becoming infected, but since

then has had severe pain in his leg, which is much worse at night. The patient does not remember that he ever had it injured, nor was he particularly exposed to cold or damp. He has been treated by several physicians. Local applications were made; of these iodine seemed to do him some good, while it was being applied.

Present condition.—Leg greatly swollen from knee to ankle; circumference two and one-half inches greater than the other; uniformly hard and tense; the skin dark colored, smooth and parchment like.

October 22: Examined before the class by Professor Maclean, who remarked that the history given was quite characteristic, but would be more perfect if the origin of the disease could be traced to some injury or to some prolonged exposure to cold and wet. There can be no doubt about the nature of the trouble; it is a case of chronic periostitis.

In these cases we do not wait for the slow action of iodide of potassium to produce a cure, nor to the more active method of repeated blistering, but resort to the cautery. It is not often in the treatment of a painful chronic disease, that you can promise your patient positive and immediate relief. This you can do in periostitis, although the patient may not have passed a night free from pain, and has not enjoyed a night of continuous sleep for weeks, months, or even years; you can truthfully insure him, that the first night after the cauterization, will be spent in quiet, peaceful sleep.

There is no difference of opinion regarding the painlessness of the operation. In all my experience I have yet to be told that the application of the heated platinum point of Paquelin's cautery was really painful. One patient, who presented himself several times to have the cautery applied to a diseased ankle, stated that the procedure was not a painful one, but that the sensation was pleasant and agreeable.

Although the cautery gives the quickest and best results in most cases, I do not regard it applicable to all cases; this I regard one of the exceptions. The disease has existed for six years, during that time, serious changes have been made in the nature of the tissues. The discoloration and general appearance of the integument over the tibia, show that the tissues would soon have undergone suppuration. I have grave suspicions that the bone has begun to break down and that the medullary cavity is filled with pus. This prediction may prove to be false, for the surgeon can be easily deceived regarding the existence of pus: this is true when there are strong indications of its presence in the softer tissues. I have noticed, in all cases like this, when the bone was trephined, great benefit was derived, whether pus was or was not present. I am quite sure that the pain will be greatly relieved in this case, if a free incision is made down through the periosteum, and the bone

drilled. I have now made a long incision through the tissues over the internal surface of the tibia. You see the free flow of dark blood from the wound. This hemorrhage will relieve the extreme venous congestion, which in itself, will be of great benefit and comfort to the patient. The periosteum is much thickened and free from the bone, which is rough—just the condition that was supposed to be existing. By means of the trephine a small button of bone will now be removed, taking care to go no deeper than the outer compact portion; this is now done, but there is no evidence of pus. If there is any pus in the medullary cavity, or if it should form, there is now means for its free escape. The wound will be packed full of oakum, keeping the incision open, to allow it to granulate and heal from the bottom, and covered with simple water dressing.

The way in which this method of treatment produces a cure in cases of long standing periostitis is obscure. The free venous hemorrhage and local depletion, which follow the incision, break up the old process, and excite a new reparative action. This effort of nature to repair the injury made by the knife, probably reduces the tissues to an embryonic condition; the nutrition of the part is changed; the hard indurated tissues, that were the result of the chronic inflammation, are softened and absorbed.

The actual cautery acts in the same way. The severe irritation of the burn, produces a profound shock, which changes the character of the nutrition in the parts.

In all those cases where the periosteum is thickened and the surrounding tissues indurated, the application of the cautery is followed with the most gratifying results. In ordinary cases but one application is necessary. If the disease has existed for some time, repeated burning may be required. Before the effect of the cautery in these cases, was known, fly-blisters were generally employed. They constitute an efficient means of treatment but their action is slower than the cautery.

October 26: Wound examined and dressed in a clinique. The long incision was rapidly filling, and had the appearance of a healthy granulating sore. The shaft of the tibia was bare at one spot, but when scratched blood oozed from the surface, showing that the bone was recovering its vascularity. The general condition much improved. The patient stated that the pain was relieved immediately upon operating, and he had experienced none of the old pain since. He slept soundly the first night after the operation, and continued to enjoy his rest.

October 29: Wound filling rapidly, inflammation ended in resolution. Was put on iodide of potash, tincture muriate of iron and tincture cinchona.

November 19: Again presented at clinique. Incision nearly healed. Discoloration and induration all disappeared.

December 4: Wound not completely healed, but in healthy condition. Had no return of pain since operation. Discharged.

NEW ENGLAND HOSPITAL.

CASE OF ENTERITIS COMPLICATED WITH THE MORPHIA HABIT.

BY HARRIET L. HARRINGTON, PH. C., M. D., BOSTON, MASSACHUSETTS.

Mrs. C., dressmaker, age twenty-nine years, entered the New England Hospital and came under my care September 8, 1883. The 15th of the May previous she was taken sick with inflammation of the bowels, and for nearly four months she did not put her feet to the floor. During the last week before entering the hospital, she had tried to sit up, and also to walk a little, but found herself too weak to do much in this direction. During her sickness she had acquired the morphine habit, being kept under the influence of the drug the greater part of the time. At the time I first saw her she was taking

R. Morphine sulphatis..... gr. 1-6.

Bismuthi subnitratiss..... grs. xx.

M. Ft. pulv. no. i. S. To be taken every six hours.

to quiet the pain and enable her to keep even a little food down, but she had to be very careful what she did eat, or she could not retain it on her stomach. Since her sickness began she has been troubled a great deal with constipation, the pain in the bowels is greatly increased after each movement, the stools are often covered with a white substance resembling mucus, and sometimes the movement is composed chiefly of this white substance. She often has severe pain in region of stomach, but it is generally after having taken an opiate. Before she was taken sick she weighed one hundred and seventy-eight pounds; at the present time her weight is less than one hundred pounds, which shows she has lost nearly eighty pounds in less than six months.

Present Condition.—Very much emaciated, skin sallow-looking. Nothing special about heart or lungs. Liver normal size. Abdomen flat and particularly sensitive. Urine normal. Appetite very poor.

September 8: Entered hospital this p. m. Has had quite a little journey and is very tired and weak. Vomited her breakfast and did not eat her dinner. Complains of much tenderness over region of stomach. 5:30 p. m., temperature, 102°; pulse, 120. 8 p. m., morphine sulphatis, one-eighth grain hypodermically.

September 9: Did not sleep well during the night, but was free from pain; is troubled with night sweats, (probably due to the morphia). Urine is high colored. 10 a. m., compound tincture avena sativa, twenty drops. This did not seem to relieve the pain. Compound iodine ointment applied over abdomen. Was put on liquid diet—eight ounces beef tea,

milk, or gruel every two hours. 11 A. M., suppository piscidiæ erythrinæ, four grains by rectum. This did not give relief. 12 M., svapnia, one grain. This relieved the pain somewhat. 7 A. M., temperature, 98.2°; pulse, 100. 5:30 P. M., temperature, 99.8°; pulse, 120. 9 P. M., morphinæ sulphatis, one-sixteenth grain hypodermically.

September 10: Slept pretty well. Bowels moved by enema this A. M., but she had a great deal of pain at the time. 7 A. M., temperature, 99°; pulse, 96. 5:30 P. M., temperature, 101.3°; pulse, 112.

R. Acidi munitici..... gr. i. x.
 Fresh beef..... lb. i.
 Aquæ..... O. i.

M. Soak twelve hours and strain. S. 3ij every two hours with a little salt and pepper in it.

Evening—has a great deal of pain in bowels, probably due to gas. Also has much pain in back and legs. 9 P. M., morphinæ sulphatis, one-fourth grain hypodermically.

September 11: Slept better than previous night. Has a great deal of pain through bowels. Feels faint and weak. Bowels moved, accompanied by extreme pain, at 8 A. M. Felt very bad afterwards. 8:30 A. M., morphinæ sulphatis, one-fourth grain hypodermically. Evening—has had a great deal of pain to-day in bowels; also, in head and back of neck. Vomited what she ate for supper. 6:30 P. M., svapnia, one grain. This seemed to relieve the pain somewhat. 9:30 P. M., morphinæ sulphatis, one-eighth grain hypodermically.

September 12: Passed a very comfortable day. Has taken svapnia, two grains, in one grain doses. During the day has not had as much pain. Sat up two and one-half hours and wrote four letters, the first she has written for some weeks. Food seemed to taste good. Temperature, A. M., 98.4°; pulse, 100. P. M., temperature, 100.4°. 10 P. M., svapnia, one-half grain.

September 13: Passed a very comfortable night without the morphia. 10 A. M., svapnia, one grain, repeated at 11 P. M. Bowels moved twice to-day with some pain.

September 14: Bowels are kept regular with salines. Moved twice to-day. 12 M., svapnia, one grain, repeated at 8:30 P. M.

September 15: Not as much pain in bowels to-day. Is a little stronger. 10 A. M., svapnia, one-half grain. 10 P. M., morphinæ sulphatis, one-eighth grain by mouth.

September 16: Passed a poor night on account of bowels moving, accompanied by much pain. 3 P. M., svapnia, one grain.

September 17: Some pain during morning. 8 A. M., svapnia, one-half grain. Tincture muriate, ten drops three times daily. 9 P. M., svapnia, one-quarter grain.

From this time until 21st one or two small doses of svapnia were given daily to quiet the pain, but the pain then became so severe that morphia had to be given again. Temperature,

22d, P. M., 102.2°; pulse, 128. Liquid diet ordered on 9th has been kept up, besides what food she cares to take.

From September 21st until September 30th, morphinæ sulphatis was given daily once or twice, and two days it was given three times in the twenty-four hours, and the dose was increased to one-fourth grain. The pain in the bowels kept increasing. A movement of the bowels was followed with great pain. Patient was dizzy, sick and faint most of the time. There was great tenderness over the bowels. Much pain in back and legs. Headache, nausea, and sometimes vomiting. Could not sleep nights unless constantly under the influence of the morphine. It was then thought best to stop the morphine entirely, and with the patient's consent it was done, and the compound tincture avena sativa was substituted for it with the following results.

September 30: Compound tincture avena sativa, thirty drops given 9 A. M., 1, 7 and 10 P. M. Towards evening began to feel some relief.

October 1: 2 A. M., avena, thirty drops. Passed a very fair night considering. Avena to be given in thirty drop doses three times daily, and once or twice in night if needed. Evening—has not been so free from pain a single day since she entered the hospital. Still has some pain in back and hips.

October 2: Took three doses of the avena during the night. Is entirely free from pain in the bowels. Castoria, one-half ounce, as needed. Pain is now much less when bowels move.

October 3: Is improving. Appetite is better. Has massage one-half hour four times a week. Electricity ten minutes daily to back. Took two doses of avena during night.

October 4: Quite comfortable. Was dressed and sat up one-half hour. Had only one dose of the avena during the night. Weight one hundred and four pounds.

October 5: Slept well without the avena, but took two doses during the day. Complains of some headache. Bowels are moving freely, with much less pain.

October 6: Took only one dose of avena during the day. Sleeps well without any medicine. Pain in back is less.

October 7: Has stopped the avena entirely. Sleeps well, better than when she was taking the morphine.

October 8: Went out doors for a short time; was carried up and down stairs. Bowels have moved *without medicine and free from pain*. At the present time is taking Philips' emulsion cod liver oil, three drachms, three times daily, also, tincture ferri muriate, ten drops, three times daily.

October 9: Sat out doors in sunshine for one and one-half hours. Appetite is good. Bowels move free from pain. All bad feelings have disappeared.

October 11: Is improving daily. *Weight one hundred and twelve and one-half pounds.*

October 18: Walked up and down stairs to-day. *Weight one hundred and fourteen and one-half pounds.*

October 24: Gains every day under treatment given on 8th. *Weight one hundred and fifteen and one-half pounds.*

R. Ferri sulphatis,

Potassii carbonatis..... āā gr. C.

M. Make into pil, no. 50. S. One taken thrice daily.

October 29: Seems as if she could not get enough to eat; is hungry all the time. Walks out doors every pleasant day. Bowels move regularly; is entirely free from pain. *Weight one hundred and twenty-three pounds.*

October 30: Says she has not felt as well in months. Dismissed. Liquid diet ordered September 9 has been continued besides her regular meals.

Heard from one week later; was still improving.

REMARKS.—The pericarp of the oat contains a substance soluble in alcohol, which has the property of stimulating the motor cells of the nervous system. This substance is nitrogenous and probably belongs to the group of the alkaloids; it is uncrystallizable, brownish, finely granular. Its formula, subject to verifications, is fifty equivalents of carbon, twenty-one of hydrogen, eleven of nitrogen, and eighteen of oxygen. It is called arenine. All varieties of oats contain some of this alkaloid, but not to an equal extent. The variety noire (black) generally contains the most. According to an analysis, oats contain seven per cent. of oil or fat, and seventeen per cent. of arenine, making twenty-four per cent. of really nutritive matter. It possesses no narcotic or anodyne effect, yet it readily relieves many cases of insomnia. It exerts a powerful influence upon, and through, the nervous system. It has proven itself especially efficacious in curing the opium or morphine habit. *Avena sativa* is made by dissolving in alcohol the active principle of common oats, (grain.) The physiological action of the remedy is to produce congestion of the base of the brain.

EDITORIAL PERISCOPE.

EDITORIAL CHANGE.

THE PHYSICIAN AND SURGEON has entered upon its sixth volume under a new editorial management. Those who have been in charge can justly feel satisfied with their success. While they, retiring from the field, look back with satisfaction, we enter, with the determination to receive, if possible, the rewards of a still further advancement of the journal's usefulness and popularity. The change will have no effect upon the original purpose of THE PHYSICIAN AND SURGEON—to furnish its

readers with the highest standard of professional ethics and the most advanced thought of the medical world. Being the organ of no individual, click or faction, it will expose and fight fraud and charlatanism wherever they are found.

Believing that a few individuals writing for the pages of the same journal, will not make it as beneficial to the profession, as if they were filled with occasional communications, from each of a much greater number, we request every reader of this journal to feel it a duty he owes to his brother practitioners, to report such cases coming under his observation that are of interest; and such methods of treating diseases, that have proven the most successful.

The want of parallelism in similar cases, is the cause of frequent error and failure. If these slight differences which mislead the practitioner, were properly recorded, correct deductions could be made and in the future similar mistakes avoided. Anomalies are met in every physician's practice but only the few take the care to report them. The keeping of "one's own council" is no virtue in the laborers working in a cause upon which depends so much of the common weal.

TREATMENT OF MEASLES.

Regarding this disease, one of the zymotic class, Dr. Maclean of Glasgow (*Lancet*) considers two things important in its treatment: (1) The management of the ferment, or whatever it is; and (2) the management of the effects of this ferment upon the system. These latter present themselves the most marked in the effect of the ailment, upon the mucous membrane. The greatest action of the disease is upon the mucous membrane of the lungs, and it is this action, that is the immediate cause of death, or the prolonged ill-health afterwards. The line of action is thus clearly set: (1) To relieve the congestion of the mucous membrane, which is the immediate cause of danger; and (2) to destroy or reduce the violence of the disease itself. This, Dr. Maclean believes, can be done successfully by giving (a child of two or three years of age) in a drink of water, a teaspoonful of the following mixture: wine of ipecacuanha, half a drachm; syrup of squills, one-half an ounce: quinine, two grains; acetate of ammonia solution, sufficient to make two ounces. The quinine to be increased according to age. This mixture contains a stimulating expectorant and diaphoretic to relieve the tension in the mucous membranes and skin, and also in the quinine a specific to destroy or abate the violence of the primary ferment. If the irritation and cough are persistently great, the addition of a little tincture of hyoscyamus is all that is necessary. Sometimes the stomach is so irritable that it is necessary to omit

the quinine; but as it is essential that quinine be introduced into the system for the destruction of the ferment, it can be administered separately in a powder mixed with saccharated carbonate of iron, which diminishes the irritant action of the quinine. The doctor has found this form of treatment good in all types of the disease, whether the attacks be mild or severe, and more especially valuable in that dangerous form, in which the eruption is of a deep purplish color. He has used this treatment for a number of years and commends it in the follow language: "I have seen many cases, and as a justification for submitting it to the notice of the profession, I do not remember having signed a certificate of death for either the disease itself or its effects."

THE PATHOLOGY OF "COLDS."

The term, "taking a cold," implies a series of sensations, with which every one is familiar, but which are very difficult to describe. The perverted physiological acts that produce the phenomena of a "cold" are generally misinterpreted, giving rise to the error made in distinguishing, where colds terminate, and the beginning of serious pathological conditions which may follow. The so-called "colds in the head," "colds on the lungs," are not colds, but their sequelæ. The duration of the cold stopped before any of these were noticed.

"Colds are chills," and chills are prolonged depressions of nerve force without the reaction, which should occur immediately after the collapse. Nineteen persons out of twenty misuse this word "reaction," and the misuse involves more than error, or confusion of terms. There are *three* stages of every strong impression made on a living organism. (1) The attack—in this case the chill; (2) the pause, like a dead-point, during which the organism is depressed—that is, lying under the stunning effect of the attack; and (3) the reaction. The "reaction" cannot occur until after the dead-point, and the mistake commonly made is to speak of the stage of exhaustion or depression, which follows any severe impression, as the reaction, whereas it is precisely because no reaction occurs and the dead-point is prolonged that matters go amiss. The physiological, or perhaps we ought to say, the pathological, process of a cold has been thus described. When the surface of the body or the air-passages are chilled by a draught, or by being drenched with rain and sitting in cold damp clothes, lying in damp sheets, and the like, the mischievous impression is made, not on the skin itself, or on the lining membrane of the air-passages, but upon the vast net-work of minute nerve-filaments, which lies beneath these membranes and connects the surfaces of the body—both external and internal—with the nerve-centres, which are the sources and foci of energy and power.

These nerve-centres receive, through the multitudinous branches of telegraph-like afferent nerves converging to them, a shock of staggering impression, which for the moment paralyzes them; and during this paralysis or stupefaction the vaso-motor, or vessel-contracting centre, whose peculiar function it is to regulate the calibre of the blood-vessels, gets the upper hand, and these blood-vessels are contracted so that they carry less blood than usual. The smaller branches of the arterial system which form a net-work immediately underneath the skin, and give it its bright pink color, are so reduced in "bore" or calibre—as any elastic or compressible tube may be reduced—that the red blood does not flow through them, and the surface looks pallid. This is the first effect of "chill." Presently comes the recovery from this state, or the "reaction" as it is called, when the first effects of the shock have passed away and the centres begin to revive. Now occurs the critical moment, if the shock has been great, and the recovery is slow or imperfect, as often happens in a depressed, or what is called a "delicate" state of the organism, the vaso-motor centre, which of course shares the general depression, though it is not the first to feel it and show it, will give way before the reaction is established; and then the heart, bounding in its recovery pumps its blood into unduly yielding and unstrung vessels, and dilates them, and local congestions or accumulations of blood may take place, while the absence of proper resistance excites the heart to tumultuous action, and the disturbances of fever and inflammation occur. It is a question of the balance in power between two parts of the nervous system, the general and the particular—the latter being the centre that regulates the calibre of the blood-vessels—and this practically resolves itself into a question of time. If the reaction of the general nervous system be quick, there is a rush of blood to the surface vessels, and due resistance being found, the heart quickens its pump-like action, and the sweat glands are thrown into activity so that perspiration ensues. If on the other hand, the vaso-motor centre has participated seriously in the shock of the chill, the muscular coats of the vessels are not properly contracted; they have lost their tone. Then the blood propelled to the surface simply dilates the vessels, so that there is the redness and heat of "fever" or pyrexia, and the skin remains dry; there is rapid action of the heart, partly because there is less than the normal resistance to overcome, and partly because the vagus fails to exert its inhibitory action, and both the muscular structure of the heart and the respiratory centre are left uncontrolled, but the current of the blood moves slowly through the vessels, and the heart-wave is perceptible in the arterioles and is present in the capillary area. Coincident with these mechanical actions and reactions, involving departure from the healthy condition of the circulation, occur disturbances of the chemical processes

of health, and consequently alterations in the nutritive relations of the various tissues of the organism and the blood.

What then is a cold? Clearly it is a disturbance of the balance between the several parts of the nervous system, brought about by the shock of a sudden or prolonged exposure to the depressing effect of "chill;" although the same physiological results may be produced in the organism by the operation of any agent which is capable of giving the nervous system a similar kind of disturbance. Nature's provisions against the consequences of a "chill" and for the prevention of a "cold" are *sneezing* and *shivering*. A violent fit of sneezing often saves a chilled body the consequences of the nerve depression or "shock," to which it has been subjected; and this shock may in its first impression be united in its area; for example, the small extent covered by a draught of cold air rushing through the crevice of a door or window. The nerve centres are aroused from their "collapse" by the commotion or explosive influence of the sneeze. If sneezing fails, nature will try a shiver which acts mechanically in the same way. If this fails, the effects are likely to be very serious, and bad consequences may ensue. The popular notion reverses the order of events, and hence the saying: "If there is sneezing, the cold will be slight, if there is shivering it will be grave;" whereas, it is slight when sneezing suffices to recover the nervous system quickly from its depression, and grave when even strong shivering fails to do so. In case of chill, with threatened cold, sneezing may be produced by a pinch of snuff of any kind. (This is how some of the vaunted "cures" of cold by snuff are brought about). Or brisk exercise may ward off the attack. The popular idea is that the circulation is restored by these remedies, but the true explanation is that the nervous system and centers are aroused. The first step towards an intelligent treatment of chill and cold is a scientific recognition of their nature.

DIAPHORESIS IN PUERPERAL CONVULSIONS.

Dr. Carl Breus, of Vienna, has published in a recent number of the *Archiv für Gynäk*, the results in eleven cases of puerperal convulsions, in the treatment of which he put the patient into a hot bath, and then wrapped her in blankets until profuse perspiration took place. His results, as recorded, are flattering in the extreme. While most of the cases were severe, only one died; ten recovered. In four of them the convulsions came on early in labor, in two at the end of a prolonged first stage of labor, one in the second, and the remaining four a few hours after delivery. The fatal case was that of a syphilitic patient, who did not come under treatment until she had been taken with a number of seizures. Four days after the convulsions

ceased, she died from pelvic cellulitis and peritonitis. This proportion of recoveries is much above the average, proving it to be a valuable accessory in the treatment of this formidable disease. Diaphoresis is not recommended by Dr. Breus, to the exclusion of other remedies, but that it should be combined with chloroform, narcotics, sedatives, and such obstetric measures as are demanded by the case. He claims that the bath and pack have no tendency to produce uterine contractions and cites a case of a patient with Bright's disease who had forty-five baths, while pregnant, with no evidence of labor being produced; neither does he believe that any harm results from them, when given to recently delivered women; and thinks it diserable to use the bath and pack in all cases where pregnant women are attacked with albuminuria, in order to prevent the pending convulsions.

PURPURA A SYMPTOM.

The number of afflictions that were regarded as distinct diseases but now known to be symptoms, that may result from numerous pathological conditions, is constantly increasing. A few years ago anasarca was regarded and treated as a disease, likewise jaundice, glycosuria, and others. In a paper read before the British Medical Association, Dr. Stephen Mackenzie shows that purpura is a symptom, not of any single cause, but that a variety of conditions may produce it. Predisposing, coöperate with determining causes, produce purpura that neither alone, could evoke. At the commencement of many cases of purpura, there are no distinct or noticeable changes in either the quality or quantity of the blood; neither variety of corpuscles show any deviation from their natural shape or size, and no abnormal constituent can be discovered in blood. In cases that have existed for some time with considerable loss of blood, the corpuscles may be greatly reduced in number and the hæmoglobin much below the normal quantity. The great changes that are found in the quality of the blood in severe cases indicate the consequences rather than the causes of the hæmorrhages. It is only when these changes appear early in the attack, that they can have any significance in the explaining the disease. But it is well known that a great reduction of the quantity of hæmoglobin, or in the number of red corpuscles, from any cause, will develop a tendency to hæmorrhage into the skin or other tissue. In some cases microcytes have been observed. A scorbutic condition of the blood existed in several cases where the analysis was made; in others the quantity of fibrin was increased; so that deficiency of fibrin is not the cause of the hæmorrhage. In specific blood diseases there is some constituent present which is not natural to the blood, or if

so, it is greatly in excess; but how it acts in producing the purpura is not known. (We are thus able to trace out the causes of many cases of purpura, but are yet in the dark as to how these causes act). Dr. Mackenzie states that it is a general belief that there must be some affection of the vessel-walls, causing them to rupture, or allowing the transudation of their contents. In a few cases, changes in the vessel-walls have been found, but in many that were examined no lesion could be found. In persons with feeble hearts the influence of gravitation is considerable in producing purpura of the lower extremities. In one case of the senile form, cold seemed to assist gravity in producing the hæmorrhages.

From the numerous ruptures occurring throughout the body, when the venom of snakes has been absorbed, from weakening of the walls of the blood-vessels, Dr. Wier Mitchell suggested that the hæmorrhages of purpura is due to an influence on the vessels. Immermann presents the ingenious explanation of a not very common variety, as being due to the changed relations between the volume of the blood and the resisting power of the vascular apparatus, during the time when a patient is convalescing from disease. Dr. Mackenzie questions the necessity to assume that there must be some disease of the blood or blood-vessels, and asks: "Is it not possible that blood may escape from rupture of healthy vessels, or even transude from them, owing to heightened local blood-pressure, brought about by some abnormal condition of the vessel-regulating mechanism?" Dr. Mitchell reported two cases of neuralgia, where there appeared at the points of pain extravasated blood. Cases of locomotor ataxy are recorded, in which ecchymoses resembling a bruise made their appearance, just as the pain was passing off. The extent and intensity of these tabetic ecchymoses are generally proportionate to the violence of the pain to which they owe their origin. They do not appear with the transitory initial pains, but are occasioned only when the pain is severe and of long duration, and correspond with the distribution of the cutaneous nerves.

Purpura has been noticed in connection with severe vomiting, colic and diarrhœa. It has been seen after extirpation of sympathetic ganglia, and when arterial tension has been heightened by ligation of the aorta. These results seem to show that the vaso-motor nerves may so change the blood-pressure as to produce the rupture of the vessels or allow free transudation into the surrounding tissues.

From these clinical and experimental observations strong arguments have been advanced in favor of the nervous origin of purpura. Dr. Mackenzie claims that there is no common etiological factor; that it is not an entity; that the different varieties must depend on individual peculiarity, in whatever that may consist; that it can no longer be regarded a disease;

and classifies the conditions under which it occurs, making the following varieties:

Vascular purpura: when due to some specific blood-disease; when blood disorder is the most important; anæmia leucocythæmia; when some constituents of the blood are wanting; when some constituents are present in excess.

Toxic purpura: when caused by some adventitious matters entering the system; phosphorus, mercury, mineral acids, quinine, iodides, venom.

Mechanical purpura: caused by heart difficulty, feeble circulation, varicose veins, paroxysms of coughing, thrombosis of venous trunks.

Neurotic purpura: when the nervous system is primarily at fault; these connected with locomotor ataxy, neuralgia, herpes, and diseases of nervous centres.

INHALATION OF ANTISEPTICS.

Recognizing the inefficiency of the means now restored to, for introducing into the lungs various antiseptics and other curative substances, by means of inhalation, Dr. Hassall, of London, reports, in the *Lancet* of October 6, the results of a series of experiments which he conducted with the view to determine if it were not possible to charge the air of a chamber with the required medicaments. He has relied upon two principles for affecting this purpose: (1) the greatly increased volatilization of certain chemical substances, which at the ordinary temperature of the air are but little volatile, obtained by spreading the substances over a very considerable surface and exposing them either in the air or on water; (2) the augmented evaporation obtained by increase of temperature in combination with extension of surface. The first principle is made practicable by suspending in the room, pieces of cloth, of a loose, coarse nature, saturated with a solution of the antiseptic; or by exposing them on a comparatively extended surface of water. By raising the temperature of the water, the results of the second principle are obtained. His experiments show that by either method, a most powerful means is provided for charging a room with an antiseptic substance to any extent required.

CONDENSATIONS.

THIS number has been unavoidably delayed. With the change in the editorial management several changes were made in the material and "make up" of the journal. Another quality of paper was ordered, but the grade sent was not the one contracted for. The new type for the headings was delayed. These and other causes have necessitated a belated issue that is

not in accordance with the wishes of either publisher or editor. This protraction will necessarily effect the punctual appearance of the next number. As soon as this deferment is recovered from the numbers will come out promptly at the beginning of each month.

THERE are many drawbacks in the usual antiseptic method of dressing wounds, and not among the least is the rapidity with which the many layers of gauze become saturated. Ordinarily the discharges come through on the first or second day after the operation, and not unfrequently the re-dressing is necessitated in a few hours. It would be a great advantage to both the patient and the surgeon if this could be prevented without interfering with the antiseptic condition of the wound. Dr. Symonds reports several cases (*Lancet*, September 22) in which he has used coarse sawdust soaked in (one in ten) solution of absolute phenol and spirit of wine. Before using it is allowed to dry slightly so that the spirit may evaporate, leaving the sawdust charged with carbolic acid. When used it is inclosed in a bag made of several layers of gauze, and applied outside of the deep dressing, the usual external dressing being put over it. The sawdust thus takes the place of the padding of gauze. Its absorbent power is very great; fourteen ounces will readily absorb about one pint of the fluid, and it has the additional advantage of keeping up an equable pressure on the divided tissue. The three advantages claimed for it, are its powerful antiseptic qualities when saturated with carbolic acid, its great absorbent power, and its adaptability to any surface.

Of late there seems to be a reaction in favor of some of the older methods of treating disease, particularly with reference to the occasional advantage of the abstraction of blood. On account of the strong popular prejudice in this matter, a medical man who supports and proposes the procedure, is liable to distrust or censure. With a view to avoid this, a novel method of "bleeding" was reported to the *British Medical Journal*, by Dr. Charles Coppinger, Dublin. He was called to see a lady of full habit, who had twenty-four hours previous dropped into a state of stupor. She presented all the symptoms of high arterial pressure, and an overloaded vascular system. Leeches could not be procured without great delay, and the advisability of blood-letting was recognized and suggested. The ladies in attendance were greatly surprised and horrified at the idea. The patient chanced to have been treated for hemicrania by hypodermic injections of morphine. On being aroused and told that "the needle" was to be inserted into the skin of her neck, she readily consented. The needle of an aspirator was then introduced into her left external jugular vein, and four ounces of blood abstracted. The result was so beneficial that

the needle was again introduced, and six ounces drawn off. The patient recovered and the lady friends had no idea of the nature of the operation. The method is well adapted to many cases, and in this novel way an overburdened circulation can be relieved to great advantage, without prejudiced friends being aware of the result until it is explained to them.

NEW PUBLICATIONS.

CHEMISTRY: GENERAL, MEDICAL AND PHARMACEUTICAL.

By John Attfield, F. R. S., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc. Tenth edition. H. C. Lea's Son & Co., Philadelphia. For sale by Sheehan & Co., Ann Arbor.

It is with satisfaction that we note that the tenth edition of this popular work, is specially revised for America. It contains such changes and additions as to now include all the chemistry of the last United States Pharmacopœia. The author has aimed to illustrate those laws and principles of chemistry, which pertain to medicine and pharmacy; making it a manual for medical and pharmaceutical students.

It contains two features that are not seen in other text-books on chemistry: (1) "more or less of the chemistry of every substance recognized officially or in general practice as a remedial agent;" (2) the paragraphs are so arranged that the volume may be used as a guide in studying the science experimentally; another difference is the exclusion of matter that is of interest only to the scientific chemist.

The subject matter of the work is well arranged. Taking up the leading properties of the elements; then the "synthetical and analytical" bearings of the relations of elementary and compound radicals; followed by the chemistry of vegetable and animal substances. The next chapters are devoted to practical toxicology, the chemistry and microscopy of "morbid urine, urinary sediments and calculi."

The appendix contains a long table of pharmaceutical preparations, with the impurities, and adulterations, with the tests for their detection.

LITERARY NOTES.

A NEW edition (1884) of "The New England Medical Register" revised by Dr. Francis H. Brown, will shortly be published by Cupples, Upham & Co., Boston.

THE *Microscope*, an illustrated by-monthly journal, edited and published by Chas. H. Stowell, M. D., and Louisa Reed Stowell, M. S., will be changed to a monthly, it will be reduced to one-half its present size.

MEDICAL DIGEST.

THE ERUPTION OF MEASLES AND SCARLET FEVER.

The eruption of measles is preceded by fever and catarrh of the whole respiratory tract for four or more days, during which time diarrhoea is often a symptom. It may first make its appearance when the skin is congested, but unless it is diverted in some such way from its usual starting point, it begins on the nape of the neck and on the temples, spreading forward to the face and then down on the trunk, the lower extremities being last involved and usually least affected. The whole eruption is generally out in three days. The color is usually of a deep pinkish-red, although, in malignant cases it may have a livid appearance. The eruption occurs in the shape of slightly elevated spots, which disappear on pressure, the blotches being often irregular, but in typical cases, are arranged in segments of circles or crescents, owing probably to the mode of distribution of the cutaneous nerve-filaments. Either before or after an epidemic is at its height, the eruption may be partial, and, should any complication occur, one of the first evidences of it is usually the sudden fading or disappearance of the eruption. On the other hand, if measles attacks a person laboring under some other affection of the skin as eczema, the eczematous eruption disappears to reappear, generally, when the fever has run its course, perhaps even in a more aggravated form. It occasionally happens that measles is unaccompanied by eruption, the specific nature of such cases is proved by the fact of their occurring during an epidemic of measles, in persons who are exposed to infection, who have not had the disease, and who do not take it at any subsequent periods.

The fever, catarrhal symptoms and eruption are at their height upon the eighth day of the disease, and, if there is no complication, they are subsided together. A slight branny desquamation, especially on the face and upper part of the body is noticed, also slight pigmentary stains, which, however soon disappear.

Scarlatina.—The eruption of scarlet fever makes its appearance on the second or third day at the furthest; it is generally first observed on the neck and upper part of the chest, whence it spreads down over the body, the face usually being spared. It consists of minute red dots situated at the orifices of the follicles which at first are discrete, but rapidly increase in number and soon coalesce forming a uniform eruption. Sometimes it may only occur in patches. When fully out the surface resembles that of a boiled lobster, the color disappearing on pressure, but in severe it is dusky red, or even petechial. The eruption begins to fade in two or three days, beginning at the

part first attacked, and about the eighth or ninth day of the fever the skin begins to peel. The desquamation is in proportion to the severity of the attack. It is accompanied with some elevation of the temperature and great care is required during its continuance else troublesome sequelæ are pretty sure to be encountered. When very slight the eruption may be overlooked.

HURRIED DINNERS.

It is a mistake to eat quickly. Mastication performed in hastiness must be imperfect even with the best of teeth, and due admixture of the salivary secretion with the food cannot take place. When a crude mass of inadequately crushed muscular fibre, or undivided solid material of any description, is thrown into the stomach, it acts as a mechanical irritant, and sets up a condition in the mucous membrane, lining that organ which greatly impedes, if it does not altogether prevent, the process of digestion. When the practice of eating quickly and filling the stomach with unprepared food is habitual, the digestive organ is rendered incapable of performing its proper functions. Either a much larger quantity of food than would be necessary under natural conditions is required, or the system suffers from a lack of nourishment.

Those animals which were intended to feed hurriedly were either gifted with the power of rumination, or provided with gizzards. Man is not so furnished, and it is fair to assume that he was intended to eat slowly. * * *

The matter may seem a small one, but it is not so. Just as a man may go on for years with defective teeth, imperfectly masticating his food, and wondering why he suffers from indigestion, so a man may habitually live under the infliction of hurried dinners, and endure the consequent loss of health, without knowing why he is not well, or how easily the cause of his illness might be remedied.—*Lancet*.

A NEW TREATMENT FOR NEURALGIA.

The subcutaneous injection of a one per cent. solution of hyperosmic acid, has been employed in Billroth's clinic for the relief of neuralgia. In one case the patient had been afflicted with sciatica for years; he had been electrized two hundred times, and had tried innumerable remedies. A hypodermic injection was given between the tuber ischii and the trochanter, and within a few days the pain was greatly relieved, and finally disappeared. It will not be safe to make too hasty deductions from these few cases, but it is hoped that the efficacy of hyperosmic acid in neuralgia will be clearly proven.

ATROPINE FOR SWEATING IN PHTHISIS.

A correspondent to the *Lancet* writes that sulphate of atropine infallibly checks the sweating in phthisis, and controls it far better than any outward application. The drug to be given in the form of a pill beginning with one-fortieth of a grain for an adult, and one-eightieth for a child. It does not, to any extent, lose its effect. In one patient who took it nightly for two years, the dose was not increased above one-twenty-fifth. The following formula is given: Sulphate of atropia, one-fortieth of a grain; hydrate of morphia, one-fourth of a grain; capsicum, one grain; and aloes pill with myrrh, three grains; but in cases with a tendency to diarrhœa, substitute oxide of zinc, three grains, for the aloes pill with myrrh.

RHAMNUS PURSHIANA.

The re-appearance of reports on this drug, which a few years ago excited such a considerable degree of professional attention, has characterized the periodical literature of the latter months of 1883. The cause of this renewed attention to this drug on the part of medical writers is more directly traceable to the interest which it has excited during the past year in Great Britain. The *British Medical Journal* has contained a number of very flattering reports on its efficacy, and the other journals have contained similar reports. The drug seems to have obtained a very strong foothold among our conservative brethren of the British Isles, and judging from the reports which have been given of its action in their hands, it is fulfilling the requirements of a tonic-laxative in that country.

The *Therapeutic Gazette*, for December, contains a symposium on cascara sagrada, from which we select some facts which do not seem to have been very generally familiar. Dr. C. W. Tangeman, of the Medical College of Ohio, has subjected it to a series of physiological experiments, the results of which he contributes as follows:

(1) Cascara sagrada, when given in small doses (fifteen to twenty drops), acts like a vegetable bitter on the stomach; it increases the flow of gastric juice, stimulates the peptic glands to increased action, thereby bringing about healthy gastric digestion.

(2) It acts on the sympathetic nervous system, sending an increased blood supply to the intestines.

(3) It increases to a limited extent peristaltic action of the small bowels, but increases it very much in the colon, and especially in the rectum.

(4) It has a specific action on the rectum in the way of peristalsis, to cause this portion of the bowel to unload itself.

(5) It does not affect the passage of the food in the small intestines any more than a bitter tonic would.

(6) It is not a safe remedy in pregnancy or uterine disorders, especially when given in cathartic doses.

(7) It does not affect the larger glandular organs, liver, pancreas or spleen, even when given in cathartic doses.

(8) Hypodermically, the remedy will never produce the permanent good results in chronic constipation that are obtained when it is given by the mouth.

(9) When employed subcutaneously it acts simply as an evacuant to the rectum.

(10) The same quantity given hypodermically that produces marked effect when administered by the mouth, will not have the same effect clinically or physiologically.

Dr. T. L. Wright, of Bellefontaine, Ohio, discusses the peculiar applicability of cascara cordial, of which rhamnus purshiana is the base, in the treatment of the constipation of elderly persons. In this class of cases many of the symptoms which are usually associated by physical decay are directly traceable to constipation, and Dr. Wright has found that cascara cordial, through its tonic-laxative properties, removes this condition greatly to the improvement of the person's spirits.

Dr. F. C. Herr, physician to the Southwestern hospital of Philadelphia, after extolling the value of cascara cordial in dyspeptic disorders, speaks very highly of the preparation as a vehicle for the administration of the more unpalatable drugs. He regards the encroachments of homoeopathy upon regular medicine as largely due to the persistent refusal of the old school of practitioners, so-called, to accede to the demands of a sick public for palatable medicines. He has found in cascara cordial a vehicle which at once succeeds in disguising the taste of many disagreeable drugs, and at the same time meets the indication so commonly present for an easy and agreeable laxative. In discussing its applicability in the treatment of young children, he has found in this cordial a preparation which is calculated to supplement, to a very large degree the "carminative bottle," which has been in so much demand among young children. The baby-mixtures are too often unsafe and should be given with a spare hand, and if cascara cordial shall be found on future trial to verify Dr. Herr's claim for it, it will indeed prove to be a very valuable addition to the physician's armamentarium.

THE USE AND ABUSE OF PESSARIES.

This subject has before now been discussed from the point of view of the proper selection of cases in which pessaries are or may be useful. The subject has various bearings. In the first place, the statistics of Vedeler and Herman, quoted in this jour-

nal, show that ante flexion is more normal than any other condition in multiparous women, and that flexions, as flexions, do not, as a matter of fact, cause dysmenorrhœa. It is impossible to conclude that if flexions do not cause the most direct of all uterine symptoms—dysmenorrhœa—they will cause the symptoms known as indirect or remote, for a test of which we refer our readers to the text-books *passim*, and which include almost every ailment to which female flesh is heir. This being the case it follows that flexions, as flexions, should not be treated. But secondly, we will suppose a typical case in which pessaries are known to do good—namely, more or less descent of the uterus, with or without retroversion, or retroflexion (which are most probably indications of descent), and we will suppose a pessary to be inserted—what amount of attention (that is attendance) should this entail? Undoubtedly a woman wearing a pessary should not be sent away ignorant of its presence, and without any directions. She should therefore be informed that such an instrument has been inserted, and she should be given certain directions. Thus it is advisable at once to tell her that it is well to wash out the vagina once or twice a day with simple water, which will prevent secretions from accumulating, decomposing, and causing an unpleasant smell (which in some cases is bad enough to suggest the presence of cancer); she should also be told that soreness, itching, or profuse discharge indicates that the pessary should be seen to, and, generally, that it should not be worn without being seen to three or four times a year. It is also usually advisable that the doctor should satisfy himself in a week or so that the pessary is doing good, and doing no harm, and then, having once started the treatment, the patient should be left to test its efficacy. Now this test implies the removal of some symptoms or symptom, which may justly be attributed to some former morbid condition, and it also implies the locomotion of the patient.

Generally speaking, a patient lying down is better without a pessary, whatever displacement is present; thus it is rare for even complete procidentia not to reduce itself, or become much smaller, when the patient lies down, and the symptoms of partial descent, which (if there are any symptoms at all) will include almost certainly a sense of weight and dragging pain in one or other iliac fossa, will disappear or become greatly diminished, in the recumbent position. A pain which is better when the patient is standing and worse when she is lying, should be regarded with suspicion, if supposed to be due to descent or displacement; it is probably nothing of the kind. Thus it is to relieve pains increased by standing that pessaries are most generally useful. If this is not affected, the uterus may be unquestionably in the "normal" position, but the pessary is useless, and if useless, injurious. Thus the proper use of pessaries is first, in most cases, after the insertion of the pessary,

to get the patient on her legs; secondly, to satisfy oneself in a few days that it is doing good and is doing no harm; but as soon as both these objects are attained, to send the patient away to test the treatment with the above directions.

It should not be the task of months to fit a woman with a pessary, any more than a truss. The following are not instances of the proper use of pessaries: To keep the patient in bed for long periods wearing a pessary; to see her every day, every other day, twice a week, for weeks, months or years. Perhaps such visits are not made to the patient, but to the pessary. However that may be, it is not the pessary, but the patient, who has to pay. What should we say of a surgeon who called for months to see a patient to whom he had given a wooden leg or a truss, and who kept him in bed for long periods; or of an oculist who fitted a patient with spectacles, and saw him every day for months, whether the spectacles seemed to suit him or not? It is true that the pessary is a truss in the dark, but that is no reason why the management of a pessary should be a deed of darkness. Recent investigations have shown that the whole question of displacements has to be reconsidered.

It cannot be too widely or too dogmatically stated that prolonged treatment by pessaries, such as we have described, is quite inadmissible and unnecessary; and if unnecessary, injurious not only to the patient—that is, to her *morale* as well as her purse—but also in the best sense to the practitioner, then to the public and the profession.

It should also be realized that a pessary is a mere form of truss, and that its operations, though removed from the general view, are not occult. Ill-treatment bids fair to bring this useful form of truss into disrepute, and we are daily expecting to meet the practitioner whose sensitiveness is such, that he shrinks from a cure whose name he has learned to mistrust and dislike; but we feel bound to say we have not come across him yet.—*Lancet*.

OPERATING BY THE ELECTRIC LIGHT.

A few weeks ago the electric light was used in the operating-room of the Royal London Ophthalmic Hospital, Moorfields. The extraction of cataract, as well as other operations, including iridectomy, for acute glaucoma and dissection for soft cataract by the aid of the light were performed. The day was well suited for the trial, as the early part of the morning was very foggy, and so dark that the operations could not have been performed without the aid of artificial light; later on the fog cleared off, and the room was then darkened, and several operations were satisfactorily completed with the aid of the new light.

The excellence of the light for operations on the eye was

well demonstrated, and we have no doubt that it will be shortly in use in most hospitals for operations by night or on dark days. The light was furnished by a platinum wire incandescent burner placed in a metal case, with a polished reflector behind, and a lens in front of it. This was fixed on a movable stand, which could be carried in the hand of the assistant.

TREATMENT OF PAINFUL CORNEAL ULCERS BY WARMTH AND ESERINE.

In the Section of Ophthalmology of the British Medical Association, Mr. Higgins reported five cases of painful corneal ulcer treated by warmth and eserine. His method is to foment the eye for fifteen or twenty minutes three or four times a day. The fomentation to be as hot as can be borne. A solution of one or two grains of sulphate of eserine to an ounce of water to be dropped into the eye three or four times a day, after the fomentations have been used. A large pad of cotton-wool thoroughly warmed laid upon the closed eyelids and secured by a bandage. Patients should be allowed to go about; should be well fed; purged if necessary; and placed on an iron tonic.

DIFFERENCES IN ERUPTIONS OF SMALL-POX AND CHICKEN-POX.

Variola (Small-pox).—The eruption makes its appearance on the second or third day of the fever, and the earlier it is observed the more serious is the case likely to be. It usually comes out in three successive crops, with an interval of some hours between each: the first on the face, neck and upper extremities; the second on the trunk; and the third on the lower extremities. The first two days it is papular; the next four it is vesicular; and on the seventh or eighth it is pustular.

The papules are about the size of millet-seeds, are firm, red and accumulated; they are situated at the orifices of the hair or sebaceous follicles, and no matter how numerous, they never coalesce. By the third day they have become converted into vesicles, the contents of which gradually change from serum into pus, so that by the seventh or eighth day the eruption is pustular. Both vesicles and pustules are depressed in the center, but when the pustules become much distended, they become spheroidal. Each pustule is now surrounded by a red areola. As the pustular stage becomes developed the parts swell, the swelling being most marked where there is much loose cellular tissue, especially on the face where it is very great, and closes the eyes completely. At this stage the odor emanating from the patient is peculiar and characteristic. During the papular stage the fever and discomfort greatly subsides, but reappears

during the pustular stage; this "secondary fever" or "fever of suppuration" is usually in proportion to the extent of eruption. This is the most critical time for the patient.

About the eighth or ninth day of the eruption or the twelfth day of the fever, desiccation commences, a dark spot appearing on the top of each pustule; or the pustules burst and the contents dry up into crusts, which generally separate between the eleventh and fourteenth days. Each prominence is the seat of repeated desquamation, which ceases in from four to six weeks; little depressions are left at the site of most of the pustules, which gradually become white. The number of pustules developed varies exceedingly; occasionally there may be only half a dozen; and not unfrequently there may be thousands. The face is the part which suffers most. In severe cases the eruption is so abundant that many of the pustules coalesce, constituting what is called "confluent small-pox." The mucous membranes are often attacked, though in a less degree than the skin.

Varicella (Chicken-pox).—This disease, although it somewhat resembles, is altogether distinct from small-pox, neither vaccination nor a previous attack of the latter afford any protection from it. Though not confined to, it is most frequently met with in children. The fever is usually very moderate, being most distinct when the eruption first comes out, soon after which it disappears. The eruption may be the first symptom observed, or it may not appear until the fourth day of the fever. It appears first on the upper part of the body, especially the back; later on it covers the face and extremities. As a rule it is scanty, especially on the extremities and is never confluent. At first it appears in the shape of red papules, which soon change into vesicles; these are not usually umbilicated. On the second or third day their contents become opaque, and in a few days dry up into crusts, which in turn soon fall off. The papular stage may be absent, vesicles appearing from the first, which if scratched may turn into pustules, and then cicatrices may be left. A few vesicles may be seen upon the mucous membrane, especially the fauces.—From a lecture by Dr. McCall Anderson, University of Glasgow.—*Medical Times and Gazette*.

SALICYLIC ACID AS AN APPLICATION TO EPITHELIOMATOUS GROWTHS.

A few days ago at Saint Bartholomew's Hospital, London, during a consultation on an interesting case of rapidly growing epitheliomatous vegetations springing from the floor of a rodent ulcer, it was advised to use a saturated solution of salicylic acid as a local application. Mr. Thomas Smith, by whom it was suggested, said that some time ago, he had been induced to

make use of this remedy in the treatment of simple papillomata, and the result had been so favorable that he was led to apply it to epitheliomatous cases also. In the first case, which had been under observation for some time, the application was entirely successful, the epitheliomatous growth having been entirely destroyed in two or three weeks. Dr. Smith is giving the acid an extensive trial.

HYPODERMIC TRANSFUSION OF BLOOD.

A woman forty-eight years of age, had suffered for a long time from menorrhagia which had reduced her to a condition of extreme anæmia. When seen by Dr. Paladini, who reports the case in the *Gazzetta Med. Italiana Lomb.*, she had frequent faintings, although in the horizontal position, was unable to take food of any kind, and in his opinion, transfusion was urgently called for on account of her very exhausted state. As the patient lived in a remote village, where appropriate instruments could not be obtained, he resolved to perform hypodermic injection by means of a syringe having a capacity of about ninety cubic centimetres, and gum elastic tube to which a trocar and canula were attached. The woman's husband having furnished about two hundred grammes of blood, two syringes were successfully injected into the subcutaneous tissue of the abdominal wall near the umbilicus, care being taken to force the trocar far enough in to insure a sufficient space for the reception of the blood. No pain or other inconvenience was caused by the operation and in about two hours the tumefaction, which was about as large as an egg, had disappeared. The next day the uterine flow decreased, and the patient was able to take food and enjoy some sleep. The marked success which attended the injection in this case leads Dr. Paladini to hope that so easy and ingenious a mode of performing transfusion will be hereafter frequently resorted to. If necessary from one hundred and twenty to three hundred or four hundred grammes of blood may thus be promptly injected by means of one, two or three punctures.—*Medical Times and Gazette*.

REMARKS ON THE SUBJECT OF STRANGULATED HERNIA.

In a paper read before the Section of Surgery, of the British Medical Association, and published in the *British Medical Journal*, Dr. J. Walton Black, Surgeon to the Royal Hospital, Belfast, made some very practical remarks relative to the subject of strangulated hernia, based upon his experience in forty-four cases.

He considers the use of the warm bath previous to making taxis positively injurious to old people, and of no service in cases of femoral hernia. A full opiate or a hypodermic injection

tion of morphia is given; the patient's bladder and rectum emptied. In about an hour, the pelvis being well elevated, chloroform is administered and taxis tried gently. In children taxis is not to be tried when the intestine has been several days strangulated, nor when it has been tried ineffectually by several medical men.

Vomiting is the symptom that most urgently calls for operative measures. Sickness may not occur so long as the patient keeps quiet and takes no nourishment, the moment he moves or takes something into his stomach the vomiting commences. In operating a long incision is to be preferred; it gives plenty of room, and enables the operator to see what he is doing, and all subsequent incisions should correspond in length to the one through the skin. When the strangulation is of several days duration, or when the symptoms of strangulation have been very acute from the first, Dr. Browne likes to open the sac and see the contents. The stricture is frequently external to the sac; yet it may be formed by the neck of the sac; or by bands of omentum within the sac; these bands may exist in connection with an eternal stricture.

In a few of his cases, owing to the large mass of bowel protruded, it was difficult to reduce by gentle taxis, but Dr. Browne found that enveloping the bowels in large sponges wrung out of carbolized hot water, caused immediate contraction of the bowel, and taxis was then easy.

In seventeen cases the sac was closed by catgut sutures, believing that this measure diminishes the risk of inflammatory changes proceeding from the structure superficial to the sac. In four cases the sac was ligatured and cut off with good results.

The dressing after the operation consisted of carbolized oil and lint, or carbolic acid and glycerine. In sixteen cases Listerism was used with benefit. Immediately after the operation the patient is put upon opium, and ice-poultices or ice-bags are placed over the abdomen; this treatment is continued as long as tenderness or pain in the abdomen is complained of. Attempts should be made to have the bowels move at the end of the fifth day, especially in old and fat people; death after operations for hernia, being frequently due to fatty change and failures of the muscular wall of the gut.

In some cases where the patient suffered much from abdominal distention, in addition to using turpentine-stupes, a rectal tube was passed with much benefit. In the forty-four cases operated upon by Dr. Browne, twelve were almost moribund at the time of the operation. He has seen many cases operated upon, which were deemed hopeless, nevertheless, they recovered. He quotes Sir A. Cooper's statement: "Indeed, there is scarcely a period of the symptoms which should forbid the operation;" and from Sir James Paget: "A patient must not be allowed to

die with strangulated hernia, if by any means the strangulation can be relieved; and you must not be averted from the operation by any number of deaths. I have had to operate on patients already dying. I would not refuse to operate, for I could not be certain that it would be useless." After the operation when symptoms of peritonitis arise, and patients go from bad to worse, the practice of the late Dr. Marion Sims, and Mr. Lawson Tait, is warmly advocated, of performing abdominal section and washing out the cavity of the abdomen to give the patient a chance.

THE PURGATIVE PRINCIPLE OF CROTON OIL.*

BY HAROLD SENIER,

Fellow of the Institute of Chemistry and of the Chemical Society.

In a paper read before this Society in March, 1878,† I pointed out that English pressed croton oil of undoubted genuineness could be separated by alcohol into two parts. The part soluble in alcohol was, or contained the vesicating principle, while the part insoluble in alcohol was entirely non-vesicating. Further experiments towards the isolation of this vesicating principle I have recorded in another paper. With respect to the other prominent property of croton oil, its purgative activity, I at that time was led by the opinion of therapeutists to believe either that this action was due to the vesicating principle or that it resided in the same portion of the oil—that portion soluble in alcohol; this, however, was not then determined. I now find that the purgative constituent does not exist in the alcohol-soluble vesicating oil, but is entirely in the alcohol non-soluble, non-vesicating oil. This I determined in the first place by experiments on myself and others, and more recently the therapeutic action of this oil has been studied by my friend Dr. J. W. Meek. My experiments consisted first, of the administration of the non-vesicating oil in doses of one-tenth minim, increased to one-half minim; if this oil contained the whole of the purgative principle, this quantity would be equivalent to about one-fifth to one minim of commercial croton oil. The oil used in these experiments was carefully freed from traces of the vesicating oil by repeated washings with alcohol until nothing more was dissolved. It was administered in the form of pills, and I found magnesium carbonate and extract of hyoscyamus convenient excipients. The general results from these experiments were, briefly, from the smaller doses a mild, and from the larger doses a powerful purgative effect, unaccompanied by any unpleasant symptoms. I supplemented these experiments by the administration of similar doses of the vesicating

*Read at an Evening Meeting of the Pharmaceutical Society of Great Britain, December 5, 1883.

† *Pharmaceutical Journal*, III, VIII, page 705.

oil under similar conditions and obtained no purgative action, but a considerable amount of irritation in the alimentary canal accompanied by nausea.

In conclusion, I do not think I am exaggerating the practical outcome of these experiments when I say, that subject to the results of more extended therapeutic experiments, this non-vesicating croton oil, either in its present form or in the more concentrated form in which I hope to obtain it, furnishes a useful, safe, speedy and pleasant purgative.

Dr. Meek describes the result of the experiments conducted by him as follows:—

REPORT ON THE PHYSIOLOGICAL ACTION OF THE NON-VESICATING PORTION OF CROTON OIL.

BY JOHN W. MEEK, M. D., LONDON.

In order to try the physiological effects of the non-vesicating portion of croton oil, Mr. H. Senier was good enough to supply me with some of that portion of the oil as isolated by him. It was made into the form of pills with extract of hyoscyamus.

Given to healthy adults in doses containing the non-vesicating portion of one-tenth of a minim of ordinary croton oil, beyond slight nausea and some sense of discomfort no appreciable effect was produced; but I found that doses containing the non-vesicating portion of half a minim of croton oil acted as a powerful purgative in from three to six hours from the time of administration. In some of the cases the oil caused griping, but not in all. The motions were usually of a loose character, though not containing a large amount of fluid. The bowels were usually opened two or three times at intervals of an hour or more between each action.

In the doses above mentioned, beyond the action on the alimentary canal, no other physiological effect was observed in any of the cases.—*Pharmaceutical Journal*.

THE VESICATING PRINCIPLE OF CROTON OIL.*

BY HAROLD SENIER.

Fellow of the Institute of Chemistry and of the Chemical Society.

In a former paper † I gave the results of an investigation into the action of alcohol on croton oil, and found that under certain conditions it separated the oil into two parts; the one part vesicating, the other non-vesicating. I briefly described the vesicating oil and also the non-vesicating oil, which I have since shown to be purgative.

In another paper I have given the results of my work, so far, on this purgative oil. In this I show, in the first place,

* Read at an Evening Meeting of the Pharmaceutical Society of Great Britain, December 5, 1883.

† *Pharmaceutical Journal and Transactions*, March 9, 1878.

more exactly what the conditions are which affect the solubility of croton oil in alcohol, maintaining and extending my previous conclusions. In the next place, I proceed to determine whether the oil soluble in alcohol is itself the vesicating principle, or what part of it has that power.

The Solubility of Croton Oil in Alcohol.—When alcohol (specific gravity '794 to '800) is mixed in equal volumes with English pressed croton oil, perfect solution takes place, the mixture being permanent at all ordinary temperatures, and this is equally true when any less quantity of alcohol is used. When, however, the proportion of alcohol to croton oil becomes as seven volumes to six, or any larger proportion of alcohol, then a part of the croton oil separates. This part varies in quantity, in the case of different samples of oil, in accordance with the conditions noted in my former paper. It is an interesting fact that that portion of the croton oil which separates when the alcohol is in excess is afterwards insoluble in any proportion of alcohol. But that portion of the oil is, when separated, soluble in all proportions.

In the discussion following my former paper, Professor Redwood remarked on an apparent discrepancy between my results on this point and some experiments made by himself some years previously.

In the experiments reported by Professor Redwood, croton oil and alcohol were used in equal volumes only and found perfectly miscible. This result, so far as it goes, agrees exactly with my own, and no doubt if Professor Redwood had employed other proportions than those given his results would also have coincided with mine. The usual statements regarding the solubility of croton oil in alcohol as found in many text-books, and incidentally revived by Mr. A. H. Allen in his recent paper on "The Chemistry and Examination of Fixed Oils"* are shown by my experiments to be inaccurate.

Search for the Vesicating Principle.—Some of the characters of the alcohol-soluble croton oil, which has been shown to contain the vesicating principle, I have described in the previous paper, to which reference has already been made. The more important of these characters, together with others since observed, are as follows: At 60° Fahrenheit this oil is of a brown color, and holds in suspension a number of acicular crystals soluble on warming. It has a strong characteristic smell of croton oil, a persistent burning taste, and readily produces pustules when applied to the skin. It has an acid reaction and a specific gravity of '987.

Solvents were first tried as a means of further separation. Water, alcohol of various strengths, benzol, chloroform, ether, petroleum naphtha, etc., were tried, at different temperatures and in various proportions, but the results did not indicate a

* *Journal Society of Chemistry, Ind.*, February 28, 1883.

method of further separation. The oil was then subjected to distillation, alone, with acids, alkalies, and by the passage through it of heated steam. Several distillates were thus obtained, but they were all non-vesicating, activity existing in a combined volatile alkaloid or alcohol.

To determine whether the fatty acids or alcoholic radical contained the vesicating principle, the oil was subjected to saponification, first of the free fatty acids. Fifty grams of oil were digested on a water-bath for one hour, with twelve and one-half grams of sodium bi-carbonate and ten grams of water. The resulting soapy mass was agitated with petroleum naphtha, and the whole placed on a filter and repeatedly washed with the same solvent. The filtrate containing the unsaponified neutral oil, when evaporated and dried, weighed 38.7 grams; the difference, representing free fatty acids, being 11.3 grams or twenty-two and one-half per cent. of the water and decomposed with sulphuric acid. The free fatty acids which separated in white flocculi were collected and washed, dissolved in alcohol and crystallized. In this state their melting point indicated fairly pure palmitic acid, which was devoid of any vesicating property. The vesicating activity does not, therefore, reside in the free fatty acids.

Returning now to the neutral oil, this was saponified by ten grams of caustic soda and twenty grams of water. The soap on cooling rose to the top as a hard cake, from which the aqueous solution containing the alcohol radical was easily separated. This on concentration gave no evidence of containing any vesicating principle. The soap was diffused in hot water, decomposed with sulphuric acid, and the free fatty acids separated. The soap previous to decomposition had no tendency to vesicate, but the free acids when liberated were strongly vesicant.

It was now evident that the vesicating principle was among the fatty acids; the next experiments were directed, therefore, to their separation. This has at present been accomplished only in an approximate manner, but the subject presented so many difficulties that it seemed advisable to publish the results so far obtained.

Many processes were applied to theseparation of these acids, which after much time and careful working gave only negative results. The description of these I shall omit. The following gave the only results from which even general conclusions could be drawn: (1) Separation by means of the different congealing points of the glycerides of the fatty acids. (2) Separation by means of the different solubilities of their lead salts in alcohol and ether. (3) Separation by fractional saponification. (4) Separation by fractional decomposition of the soda salts. The first of these separations was accomplished by filtration and slight pressure through a plug of tow in a jacketed funnel

surrounded by refrigerating mixtures. The manner of accomplishing the other three separations does not require a special description.

The conclusions from the results of these processes were briefly as follows: (1) The vesicating principle is contained in those acids having the lowest melting points. (2) The lead salt is soluble in ether, but not at all, or very slightly, in alcohol. (3) It is contained in those acids least readily saponified by alkalies. (4) It is contained in those acids first liberated when the alkali soap is decomposed by acids.

In the next experiment the acids were separated into four groups, as follows:—(1) those having ammonia salts insoluble in alcohol (palmitic acid). (2) those (after removal of group one) which are precipitated from alcoholic solution by magnesium acetate. (3) those which, in the absence of groups one and two, are precipitated as insoluble, barium salts in alcoholic solution (oleic, etc.) (4) those whose barium salts are soluble in alcohol. The fatty acids were dissolved in alcohol and saturated solutions of the reagents were added. The precipitate in each case was washed on a filter with cold alcohol. The yield of acids in each group was, in round numbers, group one, fifteen per cent; group two, twenty per cent.; group three, forty per cent., and group four, twenty-five per cent. of total fatty acids in the neutral alcohol-soluble croton oil. The acids of groups one, two and three were entirely inactive as regards vesicating effects, but those separated in group four were highly vesicant. These acids when separated are of a dark brown color, and remain liquid at 50° Fahrenheit. They may be further purified by saponification with plumbic oxide, solution of the soap in ether and regeneration with an acid. In this state they are rendered much more active. Taking into consideration the low melting point and the solubilities of the metallic salts, together with the results of the experiments on the separation of the acids by the different congealing points of their glycerides and by their partial saponification, I think it more than probable that this new acid will be found to be closely allied to oleic acid and its analogues ricinoleic and linoleic.

In conclusion, I have shown, first, what the conditions are which obtain in the separation of croton oil by alcohol into its vesicant and purgative parts. Secondly, the vesicating activity of the alcohol-soluble croton oil I have proved not to exist in the free acids and not to belong to any basic constituent, but to reside in the combined non-volatile fatty acids. These have been separated to a considerable extent, if not to complete isolation, and the probable position of the new acid in the fatty acid series I have indicated. The further elucidation and study of the new acid I reserve for a future communication.—
Pharmaceutical Journal.

MISCELLANEOUS ITEMS.

ABOUT fifty person in the town of Thorn, Prussia, have been attacked by trichinosis.

M. CHARCOT has been elected member of the Academie des Sciences in the Surgical and Medical Section, by four hundred and sixteen votes against forty-six given to M. Sappey.

DR. W. H. BYFORD, Professor of Gynæcology Rush Medical College, President and Professor Obstetrics Woman's Hospital Medical College, Chicago, Illinois, says: "We have tried the Bromidia prepared by Battle & Co. It is a useful preparation, and fulfills our expectations.

A NATIONAL Hygienic Congress was held in the City of Mexico last October, at which a petition was prepared for presentation to Congress, asking that the constitution be amended by the addition of an article placing all sanitary regulations under the jurisdiction of the general government.

TESTING ALBUMINOUS URINE.—Strange that so many fail to detect albumen in alkaline urine. It should be remembered that heat alone will not show the presence of albumen; indeed, it is apt to mislead in two opposite directions: (1) by not detecting albumen in alkaline urine; (2) by giving a phosphatic precipitate in non-albuminous urine.—*Medical Student.*

OINTMENT IN CONJUNCTIVAL CATARRH OPTHALMIA.—Red oxide of mercury, five to ten centigrammes; balsam of Peru, one drop; and vaseline five grammes; the oxide to be thoroughly rubbed up with the balsam before incorporating it with the vaseline. A portion the size of a small pea is to be introduced at night between the eyelids, when the mucus secreted by the inflamed conjunctiva induces adhesions of the eyelids: a formula recommended by Dr. Warlomout of Brussels.

COLORLESS IODINE.—In reply to the requests of many *confrères* for the formula he uses for making a colorless solution of iodine, Dr. Percy Boulton publishes in the *Lancet* of November 24, 1883: Put into an open vessel a drachm of tincture of iodine and six ounces of hot water; add twelve grains of phenol and stir with a glass rod when the solution will be at once bleached. This solution he advises for gargles, nasal douches, vaginal injections, and the many uses of an admirable antiseptic. As it greatly removes local hyperæsthesia it is valuable in such conditions as acute tonsillitis, and is regarded in this class of diseases more efficacious than iodine alone.

THE PHYSICIAN AND SURGEON

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ORIGINAL ARTICLES.

FRACTURE OF SCAPULA.

BY F. W. ROWLEY, M. D., DETROIT, MICHIGAN.

On the evening of August 31, 1883, I was called to attend Edward O., aged twenty-nine, switchman employed by the Michigan Central railroad, of a strong and sturdy frame. I learned that his left shoulder was crushed by a freight box-car while he was in the stooping position. When I first saw him at his home he was suffering considerably from shock. His limbs were cold for some distance; the pulse slow and feeble. He was conscious and suffering but little pain. Stimulants were administered which in a short time revived him. Owing to the severe shock from the accident I merely examined the parts injured. There was considerable effusion in the region of the pectoral muscles. I found no fracture of the ribs or of the clavicle or any dislocation of the latter. But at the acromion process distinct crepitus could be felt. I merely placed the patient in bed giving him one-fourth grain morphia after which he passed a comparatively easy night. In the morning he had quite recovered from the shock. I then placed a pad in the axilla, bandaged the hand across the chest and supported the arm from below. There was a large amount of effusion extending from the axilla to the sternum and as far down as the tenth rib. The skin was also ecchymosed over all this surface. Stimulating liniments and hot water were applied diligently to promote absorption. At the expiration of two weeks I removed the

appliances and found some union of bone and partial absorption of the effusions. Again applied the bandages and did not remove for two weeks more when Dr. Maclean examined the arm. He found that union had taken place almost completely and that the shoulder was in nearly its normal position. The remaining effusion (three or four ounces) was drawn off and the sac healed from the bottom in a few days. Passive movement of both the elbow and shoulder joints were recommended.

November 1: Patient is able to lift the arm to nearly the horizontal position. The shoulder is but slightly depressed, and the point of fracture is hardly perceptible.

TREATMENT OF SCARLATINA.

BY W. J. MADDOX, M. D., DAYTON, OHIO.

Treatment by the following I have found to be beneficial. The main object is to relieve the ulcerated sore throat and to reduce the febrile symptoms. The first is for ulcerated throat.

R. Sol. potassium chl. saturated.....	3ij.
Tr. ferric chl.....	3j.
Acidi carbolici.....	gtts xv.
Aquæ font.....	3iij.

M. Sig. Teaspoonful every hour.

And then take a piece of bacon rind and cut it two inches wide and long enough to reach around the throat; before applying it sprinkle with pulverized capsicum. For the fever I use

R. Tincture aconite rad.....	gtts viij.
Ant. et. pot. tart.....	grs. ss.
Aquæ font.....	3iss.

M. Sig. Teaspoonful every two or three hours until fever is abated.

REMOVAL OF FOREIGN BODY FROM THE ŒSOPHAGUS.

BY C. M. DICKSON, M. D., BRANDT, OHIO.

On Tuesday, December 18, 1883, I was called in great haste to see Mrs. H., who had swallowed a bone while eating vegetable soup at supper. When I arrived, the patient was walking the floor in great agony, while her face showed the most perfect picture of intermingled fear and anxiety I ever witnessed.

Upon examination I found the offending article of diet located about two inches below the cricoid cartilage, and about on a direct line posterior to the top of the sternum.

Thinking an emetic would remove the difficulty, I at once gave one-twentieth grain apomorphia hypodermically which produced free emesis in about two minutes; but without any effect at dislodging the bone. Not having anything better at

hand, I introduced a hard rubber catheter into the œsophagus until I came upon the obstruction, but found it required more force than could be exerted upon the catheter without bending it to such an extent that it would slip off. I withdrew the instrument and put in the stylet, and upon passing it a second time I succeeded in pushing the bone into the stomach.

I requested my patient to use the chamber, and to discontinue her visits to the "temple of Cloacina" for a few days, while search was made for the bone. During the passage of the bone through the pylorus she suffered from severe lancinating pains in the right pectoral region and under the right scapula. This continued until the following Friday evening when it had finished its travels and was expelled from the bowels.

The bone measured $1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{4}$ inches and one-fourth inch in thickness.

GENERAL CORRESPONDENCE.

OUR CHICAGO LETTER.

CHICAGO, January 25, 1884.

Chicago, so far as general practice is concerned, has been rather quiet for the past year. Mortality rates have been lower than for some years, while physicians have done considerable growling. The specialists, I suppose, are about as usual, while the general practitioner is the one who suffers. The climate here is very variable, changing many degrees in a few moments, whenever the wind gets into the west. Nearly everyone has post-pharyngeal catarrh, and it is a very obstinate disease to cure.

This city has a number of large hospitals, and splendid clinical advantage. Cook County Hospital takes the lead, having very ample accommodations for a large number of patients; some four thousand patients were treated there during the past year. I wish I could get over there and give you an account of some of the operations, but as it is some seven miles from my location, I shall have to be content with wishing. The eye and ear infirmary is also beyond my reach, as are the north side institutions. On the south side we have three very good hospitals, Saint Luke's, Mercy, and Michael Reese. Saint Luke's is maintained by the Episcopal church, and they have recently completed a very nice building, which I hope to visit soon, and will then give you an idea of what it is like. Mercy Hospital belongs to the Catholic church, and has more patients, I believe, than any other in the city, Cook County alone excepted.

Dr. N. S. Davis holds his medical clinic here, while Dr. Edmund Andrews attends to the surgical side of the house.

During the year I have witnessed many interesting and successful operations by this surgeon, and have recently obtained his permission to use his case books and report to THE PHYSICIAN AND SURGEON such cases as may be of interest, so you may expect to hear from Mercy Hospital and Professor Andrews from time to time.

Clinics are not running very heavy just now, but I hope to have something of interest for the March number. I do not think Mercy Hospital a very favorable place for operative procedures, especially abdominal surgery, but the results obtained are certainly excellent, due probably to antiseptic precaution. The spray is never used, so far as I have observed, but irrigation with various dressings are nearly always employed. The drainage tube is in great demand here.

The Michael Reese is the neatest, best constructed, best equipped, and best situated hospital I have ever seen. It is situated on the lake shore, and is so built that at some time during the day every room is invaded by the sunshine. It is the bequest of a rich Jew who had acquired a fortune in California, though I think the Jews here added to what was left them. At any rate they have a very elegant hospital. Contrary to what many believe, it is not sectarian, and all are admitted irrespective of religious belief, and I can assure you that they all are well cared for. It would delight any surgeon to go into the instrument room and see the cases they have there; almost every instrument can be found, certainly all useful instruments. The operating room is a model in itself, the operating table the most ingenious and complex I ever saw. Everything is here provided with a liberal hand, so that patients get the very best of everything. The patients are not so numerous as one would expect in so well appointed a place, but I am quite sure that this is due to the fact that many think it for the Jewish race alone.

In my next letter I hope to devote more time to scientific matters and less to gossip, and shall probably give you a mixture of the two.

WM. L. AXFORD, M. D.

68 THIRTY-FIFTH STREET, CHICAGO.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular quarterly meeting of the Michigan State Board of Health was held in the office of the Board at Lansing, Michigan, January 8, 1884, the following members being present: John Avery, M. D., of Greenville, president; J. H. Kellogg, M. D., of Battle Creek; Victor C. Vaughan, M. D., of Ann Arbor; C. V. Tyler, M. D., of Bay City; and Henry B. Baker, M. D., Secretary.

The recommendations to the warden of the State House of Correction, by Dr. John Avery, committee on Buildings, Ventilation, etc., under date of September 7, 1883, for improving the ventilation of the shops at the State House of Correction, at Ionia, were ordered printed in the next annual report.

The secretary read a resumé of recent work of other boards of health; also a summary of the work of the office of this Board during the last quarter, which showed that a successful sanitary convention had been held at Ionia; that partial arrangements had been made for holding one at Hillsdale; that the proceedings of the Muskegon, Pontiac and Reed City Conventions had been printed; that special meetings of the Board had been called at the State Reform School to examine plans for a new building; at Detroit to attend American Public Health Association; and at Ionia at the time of the Convention; that a leaflet on contagious diseases had been translated into French, Danish-Norwegian, and Swedish, for general distribution among citizens of Michigan who speak those languages; that a very general distribution of circulars on communicable diseases and on the work of health officers had been made to the health officers of cities, villages and townships in Michigan; that similar documents were distributed at Ionia, and at the State Teachers' Association; that circulars, blanks, etc., had been sent to health officers and clerks of all cities, villages and townships in Michigan for their annual report, including that of the diseases dangerous to the public health; that notice had been sent to health authorities in several parts of the State warning of the shipment of diseased cattle into such localities; that the regular distribution of weekly bulletins of sickness and of meteorology, the yearly distribution of material for meteorological reports, and the quarterly distribution of blanks to observers of diseases had been made.

The secretary presented reports from Dr. Hazelwood, who, as committee of the Board, attended the Sanitary Convention at London, Ontario, and the meeting of the Board of Corrections and Charities at East Saginaw. In connection with the first report Dr. Hazelwood described the water supply of that city (London), and the secretary, who also attended the convention, described a visit to the Asylum for the Insane near London, Ontario.

By request of the State Board of Corrections and Charities, committees were appointed to examine and report on the sanitary condition of the jails, asylums, etc., in several counties in Michigan.

Drs. Avery and Kellogg were appointed a committee to investigate and report at next regular meeting on the sewerage, ventilation, etc., of the Capitol building.

A committee, consisting of Drs. Baker, Kellogg and Vaughan, were appointed to examine and report on the sanitary condi-

tion and needs of the State Reform School and surroundings. Dr. Kellogg presented and read portions of a very interesting report on the present knowledge respecting diphtheria, which will be published in the next annual report.

Considerable discussion occurred over the examination of text-books on physiology and hygiene with reference to alcohol and other narcotics. Only four books had been presented, for examination. The committee reported relative to these books, and asked to be discharged; but the committee was continued, Professor Vaughan added to it, it was directed to confer with a similar committee from the State Board of Education, and it is to report again at the next regular meeting of the Board, April 8. It is hoped that publishers of school-books will give early attention to this subject, and that more than one book can be approved at that time.

STATE OF MICHIGAN,
ATTORNEY GENERAL'S OFFICE,
LANSING, JANUARY 9, 1884. }

HENRY B. BAKER, M. D., Secretary State Board of Health:
Dear Sir—Yours relative to the proper construction of Act 167, laws, 1883, entitled "An act to promote public Health," and inquiring whether physicians could lawfully register after the time fixed by statute for the registration of physicians, is at hand, and in reply would say, that physicians *can lawfully register at any time.*

The act after declaring the necessary qualifications for the practice of medicine in this State required that persons so qualified should within three months after the law took effect, file with the county clerk the statement therein set forth.

The three months after the law took effect, as specified in the statute, was simply a limitation of time beyond which no person could lawfully practice medicine without being registered.

The person who failed to register within that time, but practiced as a physician, made himself liable to the penalties prescribed in the act, and is also barred by Section 4 of the act from recovering pay for professional services rendered subsequent to the time when he should have registered and prior to the time of his compliance with the law. A removal to another county would necessitate a new registration.

Yours truly, J. J. VAN RIPER, Attorney General.

AN OLD VOLUME.

MACKINAW CITY, MICHIGAN, January 10, 1884.

TO THE EDITOR OF THE PHYSICIAN AND SURGEON: In looking over the November number of THE PHYSICIAN AND SURGEON, my attention was called to the article, "An Old Volume," which amused me not a little owing to the fact that Dudley B. Notson, Observer Sergeant Signal Corps, United States of America, of

this place, has in his possession a volume printed" by Clark for John Clark and to be sold at Mercero Chappel at Lower End of Cheapside, London, 1678." It comprises surgery, anatomy, and medicine, or as the author has it "chirurgery, anatomy, and physick," with "an introduction or compendious way to chirurgery."

The definition for surgery is as follows: "Chirurgery is an art, which teacheth the way by reason, how by the operation of the hand we may cure, prevent and mitigate diseases, which accidentally happen unto us. Others have thought good to describe it otherwise; as that it is that sort of physick, which undertaketh the cure of disease by the sole industry of the hand, as by cutting, burning, sawing off, uniting fractures, restoring dislocation and performing other works of which we shall hereafter treat."

Farther on in Chapter XV, of sleep and watching we have: "In sleeping we must have special care of our lying down; for first we must lie on our right side, that so the meat must fall into the bottom of our stomach, which being fleshy and less membranous, is the hotter and more powerful to assimilate. Then a little after we must turn upon our left side, that so the liver with its lobes, as with hands, may on every side embrace the ventricles, and as a fire put under a kettle, hasten the concoction. Lastly, toward morning it will not be unprofitable to turn again upon our right side, that by this situation the mouth of the stomach being open, the vapors which arise from the elixation of the chylus have freer passage. Lying upon the back is wholly to be avoided; for from hence the reins are inflamed, the stone is bred, palsies, convulsions, and all diseases which have their original from the defluxion into the spinal marrow, and to the nerves, taking beginning from thence."

In the book "of the vital parts contained in the chest" the definition of the heart is as follows: "The heart is the chief mansion of the soul, the organ of the vital faculty, the beginning of life, the fountain of the vital spirits, and, so, consequently, the continued nourisher of the vital heat, the first living and the last dying; which because it must have a natural motion of itself, was made of a dense, solid, and more compact substance, than any other part of the body."

The book is bound in heavy paste-board, and contains a large number of illustrations, giving the reader a definite idea of the manner in which our ancestors performed surgical operations, such as reducing a dislocation of the shoulder by standing the victim against a ladder, using his arm as a lever, a round of the ladder as the fulcrum and the body of the patient as the weight. The illustrations of comparative anatomy are very good. Mr. Notson, although loth to have the book go out of his possession, is willing to dispose of it to any person who is collecting old volumes.

Very respectfully, SAMUEL J. POWERS, M. D.

ORIGINAL TRANSLATIONS.

Translations from French Journals for THE PHYSICIAN AND SURGEON.
 BY F. B. FLORENTINE, M. D., SAGINAW CITY, MICHIGAN.

HYSTERO-EPILEPSY PRODUCED BY TRAUMATIC INFLUENCE.

Dr. Terrier communicates a report upon an observation sent by Dr. Villeneuve, of Marseilles. A young girl, twenty-one years old, having a small tumor directly under the right eyebrow. Dr. Villeneuve gave chloroform and proceeded to operate for its removal. When about half way in the operation the patient was suddenly seized with an hystero-epileptic fit. The tumor having been removed healed nicely but the hysterical fits were re-produced quite frequently. Later, some pustules appeared around the cicatrix and every month a new crop would appear. Under the influence of bromide of potassium the fits became less frequent. The patient's mother had also at one time, been subjected to fits. Strong emotions might be the cause of hysterical fits; anæsthetics might also cause them. Dr. Charcot observed hysterical fits after the use of ether; it ought to be the same after the use of chloroform. To these two causes traumatic action must have added itself, because it was in the middle of the operation that these fits took place. Dr. Nicaise has in his service, a patient who suffered a fracture of the vertebral column. During the convalescence said patient experienced his first attacks of epileptic fits subsequent to acute emotions. Ever since he has remained epileptic. No hereditary antecedents.

Dr. Verneuil: The etiology is complex enough in the case that Dr. Terrier has just reported. M. Verneuil knows of no examples where hysteria or epilepsy has appeared for the first time in consequence of anæsthesia. In predisposed patients, can a first attack take place in consequence of traumatism? Dr. Verneuil saw a woman in whom a fall caused the origin of a neuropathic state that lasted several years; contraction at the knee and hip, with atrophy of the muscles. In another case a young girl from the country fell upon the great trochanter; at once contraction of the muscles of the hip took place and lasted a long time. Dr. Verneuil gave chloroform and immediately the contraction disappeared forever. Dr. Duchenne, of Boulogne, has demonstrated that traumatism, even without wounds, gives rise to nervous accidents of divers nature.

Dr. Terrier: M. Charcot has observed that the hysterics of the salpêtrière endeavor to respire ether, in order to have attacks of hysterical fits. The observations of Dr. Verneuil are facts of localized hysteria; in the patient of Dr. Villeneuve it

is not, the attack being primary, a fact which must have been rarely observed. Dr. Trelat knows of two patients who after falls have had divers manifestations of the nervous system, such as contraction, paresis, etc. Dr. Berger had a patient that every time he was about to give anæsthetics for a trivial operation, would at once, go into hysterical fits.

THE ADVANTAGES OF USING THE THERMO-CAUTERY IN
THE TREATMENT OF ANAL FISTULA.

In order to recapitulate his labor, Dr. E. Farey gave us a complete synoptic table setting forth the advantages and the inconveniences of divers procedures employed in the treatment of anal fistula. These processes are the thermo-cautery, galvano-cautery, elastic ligatures, the bistoury, ecraseurs, caustics and enterotome, the latter more especially reserved for deep submucous fistulæ. With the exception of the thermo-cautery, any of the methods or instruments employed present some inconveniences. The entire synoptic table should be produced, but for the want of time, we will simply enumerate the advantages accorded to the thermo-cautery. The reader will therefore make the comparison himself. With the thermo-cautery: (1) The operation is made rapidly; (2) we can operate several fistulous passages at one session; (3) the wound is indolent; (4) chloroform is not necessary; (5) there is neither primitive nor secondary hemorrhages; (6) we destroy the calosity, and give vitality to the tissues—the wound also escapes the influence of air before granulation takes place; (8) there is no fever; no erysipelas, phlegmous, purulent infections to be apprehended; (9) there is no relapse; (10) the cicatrix is lineal. The thermo-cautery is, therefore, par excellence, in the operation of anal fistulæ, as no other methods present, in the degree, the advantages afforded by it.—*Thés. de Paris et Bull. de Thérap.*

SURGICAL SOCIETY OF PARIS.

Hypogastric operation.—Dr. Monod read a report upon several observations, addressed to the society, by physicians of the province. In the first, coming from Dr. Monchet, of Sens, the patient, aged fifty-nine years, was carrying a large calculus, the bladder was intolerable, and affected with an intense catarrh. The hypogastric operation was performed after the methods of Drs. Perier and Monod (vesicle injection, balloon of Peterson, drainage, etc.) The patient recovered.

The second case, appertaining to Dr. Jobard, was a young man eighteen years old, having three calculi weighing about two ounces. Operation the same as previous case; "marvelous result," says Dr. Godard.

The third, sent in by Dr. Villeneuve, reports a young man, sixteen years old who had been affected with a multiple of calculi ever since his infancy, and having been operated twice by the perineal process without success; the hypogastric operation was resorted to and the patient made a good recovery.

The fourth observation, addressed by Dr. Giroux, is that of a seven year old child. The same operation performed. Recovery in thirteen days. These observations prove, once more, the advantages of the hypogastric operation.

A NEW PROCESS OF PRODUCING SURGICAL ANÆSTHESIA WITH CHLOROFORM.

Dr. Peyrand gives chloroform drop by drop, that is, one drop for each inspiration. By this method of administration there is no period of excitation, and anæsthesia takes place quite rapidly. In this way, a young woman was anæsthetized in seven minutes with one drachm and one-half of chloroform during the whole operation; a child, four years old, needed but forty-five drops. A woman who failed of being put to sleep with two ounces of chloroform, ordinarily given, was put to sleep, and operated, with but six drachms and one-half only, by using Dr. Peyrand's method. The calculation made by the author of this note, brought him to the conclusion that his patients respired a mixture of air and chloroform at twelve per cent. These facts are interesting inasmuch as drawing near the studies of Dr. Paul Bert, and confirm the results obtained upon the dog with a mixture of air and chloroform at ten per cent.—*Courier Medical*.

CLINICAL LECTURES.

ABSTRACT OF REMARKS ON NÆVUS.

BY DONALD MACLEAN, M. D.,
Professor of Surgery in the University of Michigan.

This large boggy-tumor, which I feel on the inner surface of this young man's cheek, belongs to a class of growths to which the general term nævus is applied. The term implies a vast variety of conditions, each having one feature in common;—the vascular nature. They are formed from either system of blood-vessels, and from the capillaries; when the tumor is produced from dilated or sacculated arterioles it is called arterial nævus or cirroid aneurism. In this variety the tumor is semi-solid, pulsating, and when large has the bruit and many of the signs of aneurism. They occur in those regions of the body where there is free arterial anastomosis, and naturally, would be most

frequently found on the forehead, and in the temporal or occipital regions. The communicating branches of the arteries, from which they are formed, are greatly increased in size, are made more tortuous than normal, and the walls are soft and compressible. It seems that these tumors are more common where the arteries have naturally a convoluted form, which doubtless has some influence in producing the looped and spiral condition of the diseased vessels.

It is only necessary to start this process of extension and dilatation; for when once begun there is established a condition which predisposes its own further development. The coats of the vessels become more yielding; an increased quantity of blood is drawn to the parts; this in turn creates an increased activity in the surrounding vessels, and thus the area of sympathy extends. With each expanse, the vessels originally affected, are subjected to stronger and greater activity. We know that when the inhibitory action is once overcome, each additional impulse encourages and urges the one following to increased force.

This affection is not peculiar to childhood, but comes any time of life, and results from the most trivial causes. A slight bruise may produce it, or it may begin without any assignable cause, in a healthy individual, and in tissue that, to all appearances, is perfectly sound. Doubtless concealed changes have been going on, and it was only required to have these increased. This disease has no limitation. The vessels continue to enlarge; their coats gradually become thinner; pressure causes the absorption of the skin and fascia covering them; giving to the tumor a peculiar bluish appearance. The condition for the growth is permanent, but the tumor itself is subject to variation in size. During exercise, a fit of passion, or strong mental emotions of any kind, it is increased. Under continuous pressure it will disappear, but slowly returns to the original bulk, when the pressure is removed.

These arterial growths are not easily mistaken for any other tumor. The constant pulsation, which is increased with any paroxysm of excitement; the mass of soft and elastic cords felt under the skin; the color and situation, are all too clearly characteristic to allow any error in the diagnosis.

The *venous* variety differs very greatly from the *arterial*. This form of tumor is elastic and compressible, but not pulsating. When pressure is applied, it diminishes the size, but soon fills up when the force is removed. They are usually congenital, and in this respect differ from arterial varix. Another point of difference is, that it may occur in almost any part of the body, but it is much more frequent, under the mucous membrane of the cheek, lip, and the tongue. Of course it naturally occurs most frequently in those parts that are most vascular; where the anastomosis of the vessels is the most abundant. Next in

point of frequency, the parts attacked are the face, scalp, neck, and flexed surfaces, but they come upon the back, and in fact upon any part of the body. Unfortunately those parts most affected are the places where the deformity is especially noticeable and annoying.

Regarding its growth it is the most uncertain of all tumors, and it is quite important that this fact in its history should be borne in mind. A nævus has a very unstable character, it is subject to very strange tantrums, and the surgeon must be guarded about expressing an opinion. There are, however, certain facts respecting this peculiarity that are important to know. If it is congenital or if it appears within a few days after birth, it does not usually increase in size, or enlarge very slowly. The general health of the child has no small influence in determining this point.

Dentition has a marked effect upon the course of nævi. A number disappear during the first dental disturbance. Others may not entirely vanish, but greatly diminish or undergo fibrous or calcareous degeneration. Of those that remain many gradually fade and die out, while a few continue to increase in size. During the second dental eruption a further diminution occurs, and the same again at puberty. But these periods may have just the opposite effect. The tumors may become greatly aggravated and rapidly increase in size, extend in every direction, or become turgid and grow outward. When they once assume this tendency no prediction can be made regarding their progress. What had been a small pimple or pink spot may soon become a very formidable disease.

The peculiarities attending the growth of a venous nævus are characteristic of the *capillary* as well. This variety constitutes the true *nævus maternus* or birth mark. When limited to the integument, they stain the skin a red or wine color. In size they may vary from a mere point to an area of considerable extent. They may assume very fanciful and grotesque shapes. These spots are frequently supposed by the mother to be produced by some strong impression received while she carried the child *in utero*. This variety consists of an exaggeration of the capillary circulation. The size of the capillary vessels is increased, which changes the color of the skin from a pale pink to the bright strawberry red or the darker and more purple hues.

I have now described the cutaneous or superficial variety, but capillary nævi may form in any vascular tissue; those that occupy the deeper structures, from the variety known as *deep* or *subcutaneous*. The tissue between the skin and adjacent structure is the favorite seat of this variety. It exists in the form of a tumor, swelling or protrusion of the integument, which has a bluish tint, and is soft and doughy to the touch. It is readily distinguished from the superficial, by its color, tumi-

faction, and peculiar elastic puffy feel. In both varieties of capillary nævus, the color of the integument deepens and the growth enlarges when the patient is excited.

Although most commonly congenital, it sometimes begins a few weeks after birth; then the tendency to spread is much greater. Like the other forms there is no data upon which an opinion can be formed regarding its growth. It may remain unchanged for a long time and then suddenly take on an amazingly rapid growth; or it may extend more or less from the beginning and then cease, and disappear spontaneously. Any injury to the part may stimulate it into renewed energy, or set up a destructive inflammatory action causing it to shrivel and dry up.

The anatomy is about the same in the different forms. The nature of the diseased vessels and tissue is very similar to that peculiar arrangement found in the erectile tissue of the penis, spleen and other erectile organs. In these tissues, you recollect, that the arteries, instead of ending in capillaries, and through these communicating with the veins, terminate, directly, or indirectly by means of short capillaries, into large cavities, from which the small veins take their origin. The small arteries which carry the blood to these spaces are curled up, and in places somewhat dilated. These dilatations may form distinct pouches, through which the blood whirls around like in the sac of a true aneurism. The effect of this pouched and sacculated condition, does not, under normal circumstances, materially retard the blood, but rather confines and complicates the current. But when the heart's action is increased from exercise or nervous excitement, accelerating the flow through the arteries, an increased quantity of blood is forced into the part which distends the pouches and spaces, producing the engorged and turgid condition of erection. It is thus a very simple arrangement that enables these tissues to become temporarily gorged, and it is a very slight modification of this organization that forms the diseased condition that produces nævus. Another peculiar feature about these tumors is, that while the diseased part is a perfect mass of dilated vessels, having been compared to a sponge soaked in blood, the vessels which go to the growth are not increased in size or number. It is also now well known that the venous and arterial forms and subcutaneous variety of the capillary, are encapsuled. The sheath is doubtless formed from the surrounding connective tissue, as in other tumors, by being pushed aside, during the progress in the growth of the diseased structure.

As the character of these growths has been described in a somewhat separate and distinct manner, I will in the same way, take up the treatment. A small spot of nævus maternus of itself, is not a very important thing, unless in the case of females when it attacks the face. Although it is not as prone

to those fits of growth as the subcutaneous, it is less liable to disappear, but as it may at any time start to grow, it is well to destroy it, when small, and when it can be most satisfactorily treated. Vaccination is a very useful way when these spots are quite small. The vacine pustule leaves a pale cicatrix in the place of what was a red mark. Another method is to puncture the spot with a needle, dipped in strong acid or a saturated solution of perchloride of iron. The introduction of red-hot needles or the needle of the galvanic cautery, will produce an inflammation and coagulate the blood, which is the *effect* desired in any of the methods. Paste made of chloride of zinc, or arsenious acid has been successfully used. But considerable danger attends their use. When the slough comes away, it may be accompanied with profuse hemorrhage, because only a portion of the growth has been destroyed. Injections of perchloride of iron, of carbolic acid and iodine, have been made by means of the hypodermic syringe. These injecting measures are attended with very great danger.

These are examples of methods of treatment of the superficial form of capillary nœvus, but when it comes to the treatment of a case of the deep variety these measures will be altogether unsuitable. In the superficial variety only the capillaries are convoluted and dilated, but in the deep much larger vessels are involved, and when confined to the venous side of the circulation produce the venous nœvus. To deprive the tumor of its blood supply is the object of any treatment, which does not involve the total extirpation of the tumor. The coagulation of the blood is a very efficient plan. As stated, the modes adopted for the superficial, will generally prove inefficient. One of the most common modes to induce coagulation and inflammation is the introduction of a seton. The thread before it is introduced, may be dipped in some acid or solution of iron. In the deep form the circulation is not very active and by passing a number of threads through the growth the whole tumor is solidified. Injections, the same as used in the superficial, have been used, but they are attended with so great danger, that they have fallen into disuse. When used great care must be taken that it is never employed in the neighborhood of large vessels. If a drop of the fluid should escape into the circulation or a small portion of the blood clot should become detached, it will produce an embolus which may interrupt the circulation in the brain, and cause almost instant death.

When the nœvus is not large it can be strangulated. The ligature can be applied externally or subcutaneously. When the former mode is used needles are passed through under the growth and a strong thread is passed beneath the needles and firmly tied. If the circulation is stopped the whole mass will drop off in the course of a week or ten days. A nice healthy

surface is left which rapidly heals. When the tumor is too large to be encircled by the ligature one of the many ingenious subcutaneous methods may be successfully employed. These consist in passing threads through beneath the diseased structures, then tying the threads so that each chord embraces a separate portion of the growth. The needle can be made to pass in and out of the same openings so as to surround the entire mass without involving any of the integument. While these methods of strangulation are attended with considerable success, they have their uncertainties and drawbacks. It always involves a certain amount of doubt, whether the threads pass beneath the bottom of the tumor; and it also necessarily produces a long and troubled process of suppuration, and in some cases is accompanied by a great amount of constitutional irritation.

Two methods remain about which I wish particularly to speak. They are electrolysis and incision. Electrolysis may be performed in two ways; the needles may or may not be insulated. When they are not insulated the operation causes a slough similar to that made by caustic acids. As it leaves a scar, this method, in this respect has no superiority over the destruction of the growth by caustics or the cautery. But it is much more rapid and much less painful, two very important points in the destruction of a nævus. Electrolysis by means of insulated needles, is perhaps in a great majority of cases, the best method, now in the hands of the surgeon for curing nævi. The needles, with the exception of the points, are covered with vulcanite. The length of the needle left unprotected must correspond with the size of the tumor. The needles thus prepared are connected by means of a copper wire with a strong battery. There must be cells enough to produce a good spark. Both poles should be inserted, and the duration of the procedure is governed by the feeling of hardness produced in the tumor. When all parts of the tumor is firm and solid the blood is then coagulated and the cure effected. As the operation is usually long and painful, it is necessary that the patient be put under an anæsthetic. When the proper care is taken sloughing is avoided, and in fact need not occur in any case. There are some disadvantages connected with this method. It requires a strong battery, which necessitates some labor to prepare, and often it is tedious and troublesome. If the nævus is of large size a number of operations may be required. When this is the case they should not be repeated more frequently than once in two or three weeks.

The treatment by ligature or consolidation, is the one generally resorted to, from the fear that is felt about making incisions into the growth. One by one the many former surgical bugbears are being destroyed. The peritoneal membrane is now handled and cut almost with impunity; veins are ligatured, so

are nævi excised. But their removal by free incisions is no new procedure. A century ago John Bell wrote a graphic description of these tumors, and named them *aneurisms by anastomoses*; he also laid down the principle that must guide us when we use a knife, namely: never to cut into it but to cut it out.

I have already remarked that these tumors are usually circumscribed, and when so, are more or less incapsulated. The capsule, however, is not a distinct membrane lying completely outside the growth, but permeates throughout its interior. While it is not a clearly defined capsule, it nevertheless, enables the surgeon to deal with it, the same as with any tumor. Applying Bell's principle cut boldly and rapidly around it, keeping clear of the active vessels of the tumor, and lift it out entire with its capsule. The growth thus removed the surface of the wound is clean and the few bleeding muscles can be easily secured. While the tumor itself is a mass of vessels, the arteries of the surrounding sound tissue are not increased in number. When the integument is not involved and when for the sake of appearance it is important to save the skin, it can be dissected back. The incision is then made over the swelling. It is usually better to make two, at right angles with each other, and dissect up the four flaps. If any portion of the skin is discolored, it must be removed with the other diseased tissue. When the operation is completed the flaps are re-adjusted. The wound heals rapidly and the small amount of deformity that remains is surprising. If the growth be very large and it is possible to embrace it with the chain of the *écraseur*, this instrument should be used instead of the knife.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

THREE CASES OF SKIN DISEASES: TREATMENT AND REMARKS.

BY A. B. PALMER, M. D., LL. D.,

Professor of Practice and Pathology in the University of Michigan.

This gentleman, Mr. J. H., age twenty-one, was first admitted to the hospital May 29, 1883.

Personal History.—When a boy, had disagreeable sensations in his stomach, which were immediately followed by “a rush of blood to the head.” During the attacks, which lasted several minutes, he would be partially unconscious. These attacks came on about once a month; with each one there would be four or five paroxysms. They continued for three years without much change in frequency, but these spells gradually increased

in severity and finally became true fits. The muscles of the face would twitch, his eyes would become fixed, there would be frothing at the mouth, and the body would become rigid. There was no material change in his condition until two years ago when the fits stopped, but he continues to occasionally have some of the promontory symptoms. Some time during September, 1881, the patient was found lying in the barn in a semi-conscious condition; this was followed with acute mania which continued for eight days. Two years ago he first noticed an eruption on different parts of the body, but more abundant on the face. The eruption came in small papules, situated on a hard indurated base; the pimples gradually enlarged and became red, were very itchy and painful to the touch. Some of them would suppurate and discharge a small quantity of pus, others would disappear without suppuration, but in either case a small scar was produced. Hypodermic injections of curare were made into his arm, but always left a long ulcer which had a tendency not to heal. Appetite is very poor and bowels obstinately constipated. The urine for twenty-four hours was three hundred cubic centimeters, specific gravity 1030, reaction neutral. Microscopic examination revealed crystals of ammonio-magnesia phosphates.

May 30: Hydrargyrum mass to be followed by a saline was ordered. During the next two days a half drachm of sulphate of quinine was given.

June 2: The following prescription was given:

R. Potassi acetatis.....	3 vi
Potassi iodide.....	3 iiij
Aquæ camphoræ.....	3 iiij

M. Sig. One drachm three times a day.

At the same time one grain doses of quinine were ordered three times a day.

June 9: Patient feeling much better; the same treatment was continued and in addition a few doses of mass hydrargyrum followed by saline.

June 11: Alkaline bath was ordered. The mass hydrargyrum and saline were stopped and a laxative pill to be substituted, provided it produced movements of the bowels, if not the saline was to be resumed.

June 10: Patient much improved and discharged, with instruction to continue the treatment.

October 1: Patient returned to hospital. He continued to take the medicine and continued to improve. The acne became much better and gradually improved until three weeks before his return. During that period it grew rapidly worse. Pustules of the same character as those which first appeared came out abundantly. The epileptic symptoms returned soon after his leaving the hospital, and he had three attacks during the summer.

Urine for twenty-four hours, one thousand four hundred cubic centimetres, specific gravity 1020, slightly alkaline. Color and odor normal. Slight deposit of urates. To prevent the return of the epilepsy the following was given:

R. Potassium bromide..... grs. xx.

S. To be taken the middle of each morning and afternoon, and before going to bed.

To relieve the portal congestion and stimulate the intestinal juices:

R. Hydrag. mass..... gr. ij.

Ipecac..... gr. j.

Sodæ bicarbonate..... gr. xv.

M. Ft. Charta ij. One to be taken the middle of the afternoon, the other at bed time. To be followed by saline in the morning.

October 6: Much improved. The same treatment of bromide continued with the addition of Fowler's solution in six drop doses.

October 10: General health much better and acne improved.

October 17: Improvement of health continues and marked change in the eruption.

October 24: Medicine suspended for several days. Mass hydrargyrum and saline ordered.

October 27: Former treatment resumed, with the exception of the arsenic.

October 30: Stomach somewhat deranged.

R. Bismuth sub. nit..... gr. x.

This quantity to be taken after each meal.

November 3: The bromide of potassium continued to irritate the stomach, and the following was substituted:

R. Sodii bromide..... gr. xv.

Sig. To be taken three times daily.

November 5: Discharged much improved and instructed to continue treatment of the bromide.

Mrs. W's boy, aged three years. Admitted to the hospital October 9, 1883.

Personal History.—When three months old, small pustules were noticed on the crown of his head; they remained for several months and then disappeared. The eruption soon reappeared on the face, and became much worse during the eruption of the first teeth. It was now noticed on the limbs, particularly about the ankles and wrists. Last April he had a severe attack of measles, and since that time was free from the eruption until six weeks previous to his admittance, when a severe cold was followed with a renewed attack. This has spread to various parts of the body and now manifests itself as a severe case of subacute eczema. The discharge, the crusting, the thickening of the skin, etc., together with the history

of small vesicles in the beginning, and when the points of eruption make their first appearance, are characteristic.

Treatment.—The parts affected are to be bathed, so as to remove the excretion, and keep the surface as clean as possible without irritation, in a weak infusion of common wheat bran, rendered slightly alkaline by the addition of a little carbonate of soda.

R. Bicarbonate of sodium..... grs. v.
Blue mass..... grs. jss.
Ipecac..... gr. i.

M. Divide into three powders. One each night with sufficient rhubarb and magnesia or Rochell salts night and morning to produce a gentle cathartic effect.

After this:

R. Sulphate of quiniæ..... grs. v.
Chlorate of potash..... grs. v.

M. Divide in ten powders. One four times a day until all are given.

Then:

R. Acetate of potash..... ʒjss.
Iodide of potassium..... ʒss.
Mint water..... ʒiij.

M. Give half a teaspoonful in water three or four times a day.

J. G., age eighteen. Admitted to hospital October 12.

Personal History.—About three years ago patient noticed a few small pustules on his forehead and face; at the same time black spots appeared somewhat larger than the pimples. These dark colored blotches did not rise above the level of the skin; when opened, however, a blackish bloody fluid could be pressed out. These spots disappeared in three or four months and have not returned. For a year or more the pustules did not seem to change in character or to become more numerous, new ones forming about as rapidly as old ones dried up. Since a week previous to his admission the patient has felt a prickling sensation in the extremities. There occurs at regular intervals a frequent desire to micturate, at which times the urine is high colored. Masturbation was practiced since he was ten years old until recently. The general health not much disturbed. Appetite is good and bowels regular. Pulse 76, and temperature 99°. Urine for eight hours two hundred and twenty-five cubic centimeters. Specific gravity, 1038; reaction, acid; color and odor normal; oxalates and urates present.

October 13: the following treatment was ordered:

R. Mass hydrag..... gr. vi.

Sig. To be taken at night, to be followed by a saline in the morning

Then:

R. Potassium iodidi..... ʒiv.
Potassium acetatis..... ʒxj.
Aque camphoræ..... ʒiv.

M. Sig. One teaspoonful three times a day between meals and at bed time.

This eliminative and alterative course of treatment was to be continued for two or three weeks, when if the eruption does not disappear another observation will be made and other means may be required.

Clinical Remarks.—You have seen in the hospital and clinique many cases of cutaneous eruptions, a large proportion of them of the familiar kinds:—eczemas and acnes; but others were of the less common varieties and inflammatory in their character. You have seen these cases treated for the most part by alteratives, laxatives and general eliminatives. In cases of eczema, especially when the symptoms were active, when there was much redness of the diseased surface, with considerable discharge; after a cathartic or two, consisting of a small dose of blue mass at night with a saline and alkaline cathartic in the morning, you have seen me prescribe free doses of quinine, to be taken for twenty-four or forty-eight hours, so that from half a drachm to one drachm or more, has been given to an adult and a proportionate quantity to a child. You have heard me say that this remedy exerts a decided effect upon inflammatory processes, when the drug is given in such quantities for a limited period of time; and you have very frequently witnessed the truth of this statement, in cutaneous as well as other inflammations.

After this preliminary treatment these patients were put on saline, and sometimes vegetable diuretics, or acetate and iodide of potassium, etc., applying only simple soothing washes, such as wheat bran tea with a little sodæ or potash to make the wash mildly alkaline, and when protection was required as in severe eczema, an application of benzoated zinc ointment. You have seen the improvement and cures, which have so very generally occurred. In debilitated cases, which are less frequent here than among the poor and starved in large cities that seek hospital and dispensing aid, there have been added iron, quinine in small doses, cod-liver oil, hypophosphates and other tonics; and in the obstinate cases you have seen prescribed that peculiar cutaneous alterative—arsenic.

In chronic cases, in addition to baths, local alteratives, stimulants and astringents, such as glycerine and tannin, chrysophanic acid, solutions of carbolic acid, of salicylic acid, etc., have been prescribed, and I wish you to note, in how many cases this general course of treatment has succeeded, and whether you have seen it fail, especially in eczema and other obstinate forms of cutaneous inflammations.

In your note books, and better still in your memories, I hope you have these cases, which, from time to time have been presented here, carefully recorded, with the results, so far as you have witnessed them, and if so they may aid you in your future practice. I can but think it is too much the practice of the present day, to regard all such cases as the result of debility

and to resort to the so-called tonics of different kinds, without proper preceding and accompanying eliminatives and alteratives.

Those, who in times past, have attended the clinics of the distinguished Professor Valentine Mott, remember the numbers of children affected with passive inflammatory eruptions, sometimes pustular, but mostly eczematous, and can testify how uniformly he prescribed corrosive sublimate in tincture of bark. Most of these cases were regarded by him as strumous and he insisted that there was nothing which had so much effect as the small doses of bichloride of mercury, he so frequently prescribed. He seldom gave directions for any local or other general treatment. Doubtless other measures are of great service, and I do not mean to speak disparagingly of many of the means made use of in the multiplicity of modern methods, but the general treatment by eliminatives and then tonics, so much insisted upon by Sir Erasmus Wilson, should not be overlooked, in the trials of new local agents.

FIBROID TUMOR OF FOOT.

A. H., age thirty-five, admitted to hospital October 15, 1883.

History.—Three years ago patient received an injury on instep of foot, produced by a stick of wood falling upon it. There existed previous to the accident a small bunch of tissue, probably a callus or hypertrophy of the skin, caused by a heavy boot or shoe. For two weeks after the injury the patient was confined to the house and compelled to walk on crutches. Since recovering from the immediate effects of the injury, he has worked steadily until two weeks ago. For two years the growth of the tumor was slow, but for the last year has been more rapid. Of late, sharp irregular pains dart through the lower part of the leg and down over the outer malleolus. They vary in severity and are very short.

Present Condition.—From the large size of the tumor the patient has great difficulty in walking. The diseased tissue has begun to soften and break down. The integument is ruptured at one spot from which a large mass of fungous tissue protrudes. The discharge is abundant. At several other places on the surface of the growth the integument is dark colored, smooth and shining. In the morning, before the foot has been used, the tumor is slightly moveable. But when the foot is lowered and the patient has moved about, it becomes more dense and is quite fixed. Its largest measurement is twenty inches; from one malleolus to the other, fifteen and one-half inches; from foot to tibia eleven inches.

October 17: Patient presented to the class and examined by Professor Donald Maclean, who was not able to determine if

the tumor was encapsuled at its base, or if it extended into the deeper tissues and involved the tendons.

October 20: Patient was placed under an anæsthetic, and the operation for the removal of the tumor began. It was soon clearly shown that all the structures of the foot were involved. The disease was infiltrated all through the connective tissue, the sheaths of the tendons, and involved the ligaments of the foot. The patient having been informed that such conditions might exist, and that amputation would then have to be resorted to, the leg was amputated at upper third. Time of anæstheization, five minutes. Time of operation, twenty-two minutes. Amount of chloroform used one and one-half ounces.

November 3: Stump dressed before the class. The tissues of the flaps were in a flabby condition. The sharp crest of the tibia had ulcerated through. The wound was rapidly granulating. The stump was well drawn up and firmly supported.

November 27: Wound healed with the exception of one small spot, which was covered with healthy granulations. Dismissed.

REMARKS.—A dissection of the foot showed that the tumor had its origin from the anterior annular ligament. It included all the extensor tendons of the foot, and from its pressure had caused absorption of the ligaments on the anterior part to ankle. The periosteum of the lower part of tibia was diseased, and that portion of the bone had begun to break down. The structure of the tumor had undergone degeneration, was quite soft and friable. Immediately upon the removal of the foot the general health of the patient began to improve, and when dismissed was in a strong healthy condition.

LARGE PAROTID TUMOR: REMOVAL.

Mrs. B. B., age fifty-five, admitted to hospital October 16, 1883.

History.—Fifteen years ago a small swelling was noticed on the right side of the neck. It continued to gradually increase in size. Six years ago an attempt was made to remove it with plasters and caustics. These applications greatly irritated the growth, which rapidly increased. When the slough produced by the caustics came away, there was very profuse hæmorrhage. The ulcer remained open for a long time and then finally healed.

Present Condition.—The tumor is very large, and projects as a great mass from the side of the neck. It is nodulated, and at points the skin is discolored and almost ready to rupture. It is not painful, but from its great dimensions is very annoying and inconvenient. The tumor is fifteen inches in circumference; measuring from the malar bone over the growth, to its

attachment to the neck, the distance is nine and one-half inches; from temporal region measuring down over the tumor, it is nine and one-half inches.

October 20: The patient was presented at a clinique. She was very much agitated, and while being placed under the anæsthetic behaved very badly. During the operation artificial respiration was employed for several minutes. The operation was free from any difficulties. None of the important structures of the neck were involved. The interior of the tumor, and several places on its surface, the structures had degenerated, softened, and had broken down. The edges of the incision were accurately adjusted and the wound dressed with oil-silk and cotton.

November 10: Up to this date the wound had continued to heal nicely, and the general health was good. Strong symptoms of septicæmia now began to manifest themselves. Her face began to swell, and a zone of erysipelatous inflammation developed around the wound.

R. Quinæ sulph..... gr. xxv.

M. Sig. To be taken in four hours.

The administration of the above reduced the temperature from 104½° to 101°.

November 11: Patient much improved. Swelling nearly all disappeared from face. Erysipelas checked and rapidly disappearing.

November 17: Wound nearly healed. Dismissed.

EDITORIAL PERISCOPE.

THE TYPHOID FEVER OF AMERICA: ITS NATURE, CAUSE, AND PREVENTION.

The *Sanitarian* for January publishes a paper by R. J. Ferguson, A. M., M. D., Secretary of the Iowa State Board of Health, which was read at a meeting of the Board November 2. The author very earnestly and ably refutes that typhoid fever is a specific contagious disease. In all his experience, which dates back to 1844-45, when he was interne in Blockley Hospital, Philadelphia, and which is carried through several epidemics of the disease before, during and after the war, he never saw anything like contagion, or any means of prevention used. Against the theory that the disease is exanthematous and specifically contagious, he quotes from Murchison, and Liebermeister, and also from Dr. Caball's paper on the "Etiology of Enteric Fever," read before the section of Public Hygiene and State Medicine of the American Medical Association in 1877; from the last Annual Report of the State Board of Health

of Kentucky (1883). The paper published in this report was read by the president of that board, Dr. Thompson, who says "typhoid fever is the greatest scourge to which *farmers* are subjected." He gives numerous instances of the spontaneous origin of the disease and these in a sparsely settled country. Drake, in "Diseases of the Mississippi Valley," describes a mountain fever which prevailed in the Alpine region of North Carolina. These cases are sporadic at almost any season of the year, but are rife from August to November. He speaks of them as "a connecting link between the periodical and typhus fevers."

The author is of the opinion, from the many facts that have been correctly observed and recorded, applying with positive certainty to this disease as recognized in our own country, that, the time has arrived when its etiology, pathology and therapeutics can be completely studied without aid from other countries. Dr. Ferquharson does not accept the exclusive theory that the disease must be produced by germs, from intestinal ulcers, which are carried out of the body with the *fæces*, and enter others through the mediums of air or water, and at the close of his paper offers the following deductions:

(1) That typhoid fever in this country is not contagious, and not being placed in the same category with small-pox, scarlet fever, diphtheria, etc., does not need the minute direction for isolation, disinfection, destruction of clothing or fomites, etc., so eminently proper in the latter diseases. Such directions in regard to a disease so common as typhoid fever, do more harm than good, and in this way: they are so minute and particular as to most people to seem impracticable; they are therefore neglected, and no ill consequences following, they are confirmed in their opinion (which in this case happens to be correct), that typhoid fever is not contagious; thus bringing contempt, more or less, for all sanitary regulations.

It may be remarked, can nothing be done to prevent typhoid fever? And it must be answered that in our present condition of knowledge as to the cause of that disease, but little can be done, and that in a general way. Our farmers would not, if they could, do away with the exuberant richness of the virgin soil, nor diminish the almost tropical temperature of our summer, yet these are the prime factors in the production of typhoid fever. Any one wishing to avoid this fever should look to the following points:

(1) As to water, to see that it is as pure as possible. If from a cistern, that it is well built and frequently cleaned. If from a well, that it is walled up with brick or stone, laid in cement, and is so situated that it gets no surface or soil-water contamination; that it has no wooden curb to rot and furnish a common cause of the fever (*aqua-malaria*).

(2) The house should be well ventilated, not built, if possi-

ble, over a marshy spot, or one with a clay sub-soil. It should have a cellar, either naturally dry or made so by efficient drainage, and this cellar should never be used as a store-room for vegetables, and if this is unavoidable, that these should never be allowed to rot.

(3) No slop-water nor indeed any kind of water, should be thrown upon the ground near the house. All garbage, if not consumed by pigs, should be frequently removed, or better still, especially in towns and villages, burned up in the kitchen fire.

(4) If drains exist, and they are exceedingly necessary to any well-ordered household, they should receive constant care and attention. That they have no leaks nor obstructions, and that they are as frequently and thoroughly flooded as the water supply of the place will admit. Though *feces* do not here play the important part in the production of typhoid fever as it appears to do in England, yet on general hygienic principles no accumulation of it should be allowed to take place, but when privies, and, still worse, cesspools exist, they should be kept from putrefaction by the abundant use of that good and cheap disinfectant, copperas.

(5) In cases of sickness from typhoid fever in a family, isolation of the patient, so far as possible, is to be recommended, not from any fear of contagion, but to afford that quiet, and that abundant supply of fresh air so necessary in the treatment of all fevers. The stools should be disinfected and deodorized so soon as passed, not for fear of contagion, but upon the general principles of decency, and increased comfort to the patient, and all the household.

HIGH AMPUTATIONS FOR SENILE GANGRENE.

In a late meeting of the Royal Medical and Chirurgical Society, Mr. Jonathan Hutchinson read a paper, the chief object of which was to urge the safety and expediency of amputation in senile gangrene, if the operation could be done remote from the disease. The author urged that the disappointments of amputations made, hitherto, were owing to their being made too near the seat of injury, and advised that in the common forms, where the toes and foot were only involved, to amputate at lower third of the thigh, and when the fingers and hand were affected, the middle of the upper arm was indicated. Defective nutrition of the flaps, due to the calcification of the arteries, was the chief source of failure, and this danger was not met when the amputation was done sufficiently high. As soon as the disease was fully established, was, in his opinion, the best time to operate. There was great risk in waiting for spontaneous cure, this was the exceptional termination, as much more frequently death resulted after a long period of much suffering.

Lister's antiseptic precautions should be very carefully used.

Although the number of cases upon which Mr. Hutchinson bases his conclusions, was hardly sufficiently great to overthrow an old established rule, yet the principle was founded upon sound arguments. Blood poisoning is the immediate causes of death in the great majority of cases of senile gangrene. The removal of the source of this danger, by high amputation, is an expediency so reasonable, that it should not be condemned because it is in opposition to a former mode of treatment.

NERVE-STRETCHING.

Since nerve-stretching has come so much in vogue as an operation for the relief of pain, to know how much force can be applied without tearing the nerve, is a point that often creates considerable anxiety in the mind of the operator. Those who have made experiments, to test the strength of nerves, were doubtless all alike astonished at the ordinary weight which they will bear before they break. In "the Bradshaw" lecture delivered at the Royal College of Surgeons, Mr. Marshall, gave the results of various experimentors in the following table:

COHESION OF NERVES. BREAKING STRAIN IN POUNDS.

Human Nerves after Death. (TROMBETTA).

	POUNDS.
Trigeminus { Supra orbital.....	6
{ Infra orbital.....	12½
{ Mental.....	5
Cords of brachial plexus.....	52 to 64
Ulnar nerve.....	58
Musculo-spiral.....	61
Median.....	84
Crural.....	83
Internal Popliteal.....	114
Great sciatic { (Johnson Syonington).....	86 to 176
{ (Trillaux).....	118 to 127
{ (Gillette).....	165
{ (Trombetta).....	82 to 288
{ (Ceccherelli).....	154 to 220
Lowest weight.....	82
Highest weight.....	288
Mean weight.....	185

Living nerves in animals—Great sciatic will bear $\frac{1}{4}$ of the body weight (Stintzing).

Average weight human body 150 pounds; $\frac{1}{8}$ of 150=83.3 pounds.

The normal function of healthy sciatic nerve completely restored even after the nerve has been stretched with a force equal to a little more than half the body weight (Stintzing)

Safe strain for healthy sciatic (man) 60 pounds.

Safe strain for diseased sciatic (man) 30 pounds.

He accounts for the great difference in the breaking weight of the sciatic; in the examination of nerves of persons differing in height, conformation, and conditions of health; and from

the probability of some of the nerves being diseased themselves, and the effect of postmortem changes.

The results of stretching on the structure of a nerve is very interesting. Mr. Marshall expressed these effects in the truism: That experiment has shown that every constituent of the nerve is more or less modified, altered or changed, by the force applied to it, in proportion to the force itself. He claims that the discrepancy of the various observations resulted from the different degrees of force used. Diagrams were exhibited, which were drawn from microscopic specimens, prepared by Mr. Horsley. It was shown that in the sheath which covers the unstretched nerve the fibres are beautifully wavy, like fibrous tissue fibres. The tubules are more or less loose in their sheath, and that the perineurium presents a wavy contour in the unstretched nerve. A specimen from the same median nerve, stretched by a weight of twenty-eight pounds, showed the fibres, instead of being wavy, are stretched in perfectly straight lines, so that the perineurium is perfectly straight; the tubules are narrowed and greatly stretched. A transverse section of the unstretched nerve shows the perineurium in a loose condition, the tubes in which the nerve fasciculi lie are more or less open, and there is a space between the fasciculus and perineurium, which during life is most likely filled with lymphatic fluid. In a similar section of a stretched nerve the sheath is again seen as a straight rigid line; the fasciculi are compressed and the lymphatic space surrounding these bundles obliterated. Other very interesting changes take place in the nerve tubules. An abnormal or irregular segmentation of the medullary sheath is noticed, sometimes the tubuli break, and more rarely the axis-cylinder gives way. In the living nerve these anatomical changes are followed by degenerations. The sheath becomes infiltrated and hyperæmic; the tubules change rapidly, the fine nerve tubules dissolve; the axis-cylinder is broken across; the medullary matter escapes in the form of fat globules; the whole nerve mass is subject to soft atrophic changes, which are followed by those of restoration.

Mr. Marshall illustrated by means of a glass tube, filled with fluid, ending in a piece of elastic tubing, that when an elastic tube is elongated its capacity is increased. Although it appears that the nerve bundles are compressed, and also since the medullary sheath, which is but a hollow tube, must compress its contents. But the experiment is an actual proof that although the perineurial channels are diminished in their transverse measurement, they are so much elongated that the capacity is increased.

The author finds an endless variety of statements, regarding the results on the functions and properties of the nerve from stretching. These functions are influenced, according to the amount of force used. In slight stretching there is very little

depression, but the depression is increased in proportion with the force employed. When the stretching is strong enough all the sensory functions are depressed; the sense of temperature as well as that of common touch. When the nerve is slightly stretched, the power of conducting impressions is increased, but as the extension is increased the irritability is gradually diminished. The early increase of the irritability, is an important factor, and doubtless explains the way in which this operation acts upon the living nerves. The reflex properties are also diminished, but is not extinguished as early as sensation and motion. It is doubted if any degree of stretching has any mechanical effect upon the spinal cord.

The tables prepared by Mr. Marshall with reference to the actual effects of nerve-stretching, show that for neuralgia the proportion of successes is very large; for locomotor ataxy much less, but the great preponderance of this tabulated testimony is in favor of the operation for the relief and cure of pain in both diseases.

In considering the possible modes in which nerve-stretching cures the pains of neuralgia and tabes, the author points out the fact, that neuralgic pains are increased by pressure and movement, and that they manifest themselves at particular points, where the anatomical relations are such that the nerves are more liable to internal pressure; and argues that the pain must be in the nerve itself. If it were in the tubules it would be transferred by the consciousness to the extremities of the nerve's fibres, but the pain being in the nerve itself, he concludes that it must be due to the *nervi nervorum*. Sappey describes such *nervi nervorum* with the optic nerve only and furnished by the ciliary nerves, but Mr. Marshall believes all nerves to be thus supplied. As no tissue, whether it be periosteum, muscle, or joint-surface, can feel pain, except through its own nerves, he contends that the pain in the nerve is through its own nervous supply—the *nervi nervorum*. Accepting the opinion that such "*neural*" nerves do exist in the connective tissue or sheath of the nerve when the nerve trunk is stretched, their tubules must be stretched, broken and sacrificed to a much greater extent than the tubules enclosed in the sheath. This injury to the *nervi nervorum* must necessarily produce their complete paralysis. In this way he accounts for the relief of certain neuralgic pains. In those neuralgias that are not due to disease of the *nervi nervorum*, when the nerves are affected and the pain referred to the periphery, nerve-stretching probably acts in the same way, in many cases, but in others by partially benumbing or paralyzing the internal tubules, or by indirect effects on nerve-centres.

Concerning the extent to which nerves may be stretched, he cautions that any set of tables constitutes a very unsafe guide. While sciatic nerves have broken at eight-two pounds, whereas

the mean is one hundred and eighty-five pounds, and Stintzing's observations show that the living nerve can be safely stretched with half the weight of the animal's body, the author, believes that no sciatic should be subjected to a force greater than thirty or forty pounds. This he thinks is as hard as a man can pull with his thumb and finger while holding a soft nerve. Council is given to surgeons to educate their feeling of resistance to be able to judge by this sense, how much force is necessary to the adequate amount of stretching. The nerve sensibly yields to the traction made upon it, and from certain internal creeping sensations and vibrations the surgeon knows when a sufficient force has been applied.

With reference to quality and quantity of the force. A sudden jerk is not regarded adequate. Stintzing in his experiments found that the best way to produce his results was to keep up the given pressure employed for a certain uniform time. A sudden pull, however hard, does not produce those internal changes that constitute true nerve-stretching. These changes are easily reached by a continuous strain with a moderate force, for a period of five or more minutes. There is no doubt better and safer results would be obtained if surgeons would adopt this principle. Regarding direction, Stintzing says stretch downward in tabes, and upward in neuralgia. Mr. Marshall advises to stretch both ways in neuralgia, and get as near to the seat of severest pain as possible; while in tabes it is essential to stretch from the trunk or body. Cutting need not always be resorted to in order to stretch the nerve. The sciatic can be put upon a very great strain by flexing the knees, and then bending the thigh upon the body; now extending the leg, and flexing the foot upon the leg. Specimens of nerves subject to this process of stretching show that the diameter is diminished. A fair percentage of favorable results are recorded for this method of stretching. The elongation that occurs when the body is suspended by means of Sayre's apparatus, is supposed to produce a slight degree of tension on the posterior roots of the spinal cord. Making use of this procedure for ten minutes three times a week, Motschutkowski derived positive benefit in patients suffering from locomotor ataxy. Mr. Marshall does not regard the danger attending nerve-stretching any greater than that which accompanies any surgical operation.

DRY SALICYLIC ACID AS A SURGICAL DRESSING.

In reporting a case of Hey's operation performed by Dr. F. E. Daniels, of Fort Worth, Texas, for the *Texas Courier-Record of Medicine*, Dr. E. L. Stroud describes in detail the subsequent dressing of the stump. Dr. Daniels has used the dry salicylic acid as an antiseptic dressing, since the fall of 1879. He claims

to have first pointed out to the profession that salicylic acid, possesses decided analgesiant properties, when used dry upon cut or abraded surfaces. He has discarded the use of water in dressing wounds; believing that water employed pure or in any way is wrong, and opposed to the fundamental principles of antiseptic surgery. The dressing of this case is thus described by Dr. Stroud:

"After closing the stump, all moisture was carefully wiped away, and the cut surfaces, after being carefully coapted, were thickly covered with dry salicylic acid; a compress applied dry, and a roller bandage moderately tight was passed around the stump." "On the sixth day from the operation the bandage was removed and a fresh supply of the acid applied; the first put on having formed a pasty coating, which filled accurately all the crevices, excluding the air, and thus acting as a scab. None of this was disturbed. In four days more the dressing was again removed, and more acid dusted on; and again, for the last time, it was dressed on the thirteenth day, when the patient was dismissed."

At no time was there the least fœtor, pain, or sign of inflammation. In this case and others where similar results were obtained, salicylic acid exhibited the properties of a perfect local anæsthetic, a deoderant and disinfectant, and as a surgical dressing possesses the advantage over the Listerian dressing, in being clean, light, and easily applied.

NERVOUS DERANGEMENTS OF THE HEART.

In a meeting of the Medical Society of London, Dr. Milner Frothergill read a paper on "Some Nervous Derangements of the Heart." He said that the organic diseases of the heart usually force themselves upon the notice of the patient by some indirect symptoms—as shortness of breath on exertion rather than directly. With the neurosal affections on the contrary, the attention is drawn to the heart directly and immediately. This constitutes a broad main line of demarcation between the disorders of the heart. The first form of disorder was intermittency, a halt in the rhythmic stroke of the heart. As such it is a mere "neurosal halt," though it is not uncommonly found in elderly men who may at the same time be the subjects of degenerative changes. In these cases, when the halt is increased by an effort, it has a suggestive value; even then the halt is usually less felt by the patient than is the true neurosal halt without any disease. Sometimes the halt is found in the radial pulse, when the heart's stroke can be heard; this tells of an arterial blood-wave too feeble to reach the radial artery. Then palpitation not linked with effort, but coming on at other times when quiet is being observed, or even waking the patient up

from sleep, is neurosal in character, though having varied casual relationships. Not rarely it is due to some disturbance in the reproductive organs, especially in women. Pain in the side often coexists with attacks of palpitation, and then the sufferer is sure her heart is "affected." Such "reflex palpitation" is commonly met with. Then there is the "tumultuous" or "badly behaved" heart, whose action is never calm, often a simple nuisance to its owner. There is, too, disturbed action of the heart from indigestion. Then the heart's beat may be slowed by the action of the "inhibitory" fibers of the vagus nerves, or hastened by some action of the "accelerator" fibers. In the latter case the heart may run off suddenly at the rate of two hundred per minute for some hours, ceasing as rapidly as it began. The opposite condition is also present at intervals in some cases, though more persistent in others. Great disturbances of the heart's action, which is often markedly enfeebled, are found with latent gout, usually relieved by an attack of regular gout. Then there is the "irritable heart," where, though the condition is truly neurosal, there is distinct inability to maintain effort. This is the result of much hard work and mental strain combined, and is commonly seen in medical men. There is also the "smoker's" heart and "tea drinker's" heart, well recognized disorders; truly "toxic" derangements of the heart. Angina pectoris (vaso-motoria) may occur with a heart still structurally sound, or in one where fatty decay is established. In the first it is of comparatively little importance; in the latter it is fraught with danger to life.

ON FATAL PYREXIA FOLLOWING THE USE OF THE CATHETER IN CERTAIN CASES OF CHRONIC RETENTION OF URINE.

In a communication on this subject to the *British Medical Journal*, made by Bennett May, F. R. C. S., he states that many years ago he was impressed with the critical and dangerous train of symptoms which are frequently lighted up when the catheter-life is first embarked upon. Within twenty-four hours of emptying the bladder for the first time by catheter, in cases of chronic retention from enlarged prostate with clear normal urine and fair general health, the small beginnings of future great disaster may sometimes be seen in the turbidity of the urine and feverish illness of the patient. Day by day the condition grows rapidly worse. As the urine becomes more fetid and bloody the patient falls into the "typhoid" state, with dry brown tongue and delirium, while the powers of life rapidly fail. Dr. May never starts on the use of the catheter in such a patient without well weighing the alternatives, without adopting special prophylactic measures, and without a full explanation

to the patient and his friends of the nature of the treatment to be adopted with the possible contingencies its employment entails.

Sir Henry Thompson points out in his work on "Diseases of the Urinary Organs," that judgment is required to decide when the change should be made from the usual mode of micturition to the artificial one. His instructions are to relieve the bladder in part only of its contents, so as to establish a state of tolerance by prolonging the probationary period; and he particularly cautions that, the longer the use of the catheter is postponed, after the early stage of the malady is passed, the worse will be the symptoms when its employment becomes compulsory. It is Dr. May's experience, that even with every precaution of cleanliness, gentleness, gradual withdrawal of urine, and confinement to bed, the mechanical disturbance is sufficient, in some cases, to establish a cystitis which is quite uncontrollable.

TRICHINIASIS IN SAXONY.

An account of the late outbreak of trichiniasis in Saxony, was given at a recent meeting of the Paris Academy of Medicine. The investigation was conducted by M. Brouardel and M. Grancher. The true nature of the trouble was not suspected at first. Two postmortem examinations were made by these gentlemen, and trichinæ were found in abundance in all the muscles in these particular regions in which they are most generally found; thus leaving no doubt regarding the character of the disease.

The following are a few facts concerning the epidemic: The hog which furnished the trichinous flesh was killed on the 12th of September. Two neighbors of the butcher's who ate of the meat raw, the next day, fell ill in four days, and died a month later. The remainder was mixed with other meat and made into sausage. All who ate of this meat raw as is the German manner, nearly five hundred, sickened in a short time with the disease. Of this number fifty-three died. Five persons who ate of the meat slightly cooked escaped, but the woman who prepared the meal, and ate some of it before cooking, was herself infected.

One conclusion that can be made from these facts, is that the manner in which the Germans and French eat their pork, is the danger which needs guarding, and not the importation of the American hog. Another, that if these governments were as careful and as thorough in the inspection of the pork slaughtered in their own respective countries, as they are in framing of their custom laws to prevent the importation of American pork, trichiniasis would be a rare disease, and such ravenous outbreaks, as the one described, would never be known.

PASTEUR'S NEW METHOD OF ATTENUATION.

The view that vaccinia is attenuated variola is well known, and has been extensively adopted by English physicians. If the opinion means anything, it signifies that the two diseases are in essence one and the same differing only in degree. M. Pasteur has recently found that by passing the bacillus of "rouget" of pigs through rabbits, he can effect a considerable attenuation of the "rouget" virus. He has shown that rabbits inoculated with the bacillus of rouget become very ill and die. But if inoculation be made on pigs from those rabbits at the end of a series, it is found that the pigs have the disease in a mild form, and, moreover that they enjoy immunity from further attacks of "rouget." This simply means that the rabbits have effected, or the bacillus has undergone while in them, an attenuation of virulence. So the pigs may be vaccinated, with the modified virus, have the disease in a mild form, and thereafter be protected from the disease. The analogy between this process and the accepted view of vaccinia is very close. The variolus virus is believed to pass through the cow, and there to become attenuated, so that inoculation from the cow-pox no longer produces variola in the human subject but cow-pox (vaccinia).

CONDENSATIONS.

On another page we print a letter from the Attorney General, Honorable J. J. Van Riper, in reply to a letter of inquiry from the Secretary of the State Board of Health, in which the time that physicians can register, and the effects of non-registration, is clearly stated.

NEW PUBLICATIONS.

FAT AND BLOOD: An essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. Weir Mitchell, M. D., Member of the National Academy of Sciences; Physician to the Orthopædic Hospital and Infirmary for Diseases of the Nervous System, etc., etc. Third edition, revised, with additions. J. B. Lippincott & Co., Philadelphia.

This little book is very neatly bound and printed on a superior quality of paper. In rewriting this edition the author has added many practical hints, and inserted considerable matter regarding the treatment of obesity, the use of milk as a diet and its effects on the excretions.

The author points out that in diseases of the nervous system it is important to know whether or not the patient is losing or has lost flesh. Practical advice is given in the third chapter regarding the selection of cases for treatment. In the fourth

chapter the effects of seclusion are discussed. The remainder of the work is devoted to the consideration of systemic methods of treatment. Rest, message, electricity and over-feeding are the measures advised. To say the least, some of his plans are startling new and strongly border on the unique. Upon this point his former prints were criticised, in reply to which the author in this revision, states that many cases of cures have been published, produced by the use of his treatment, and philosophically adds that regarding the question of originality, he is not concerned, and alone cares to know that by the method in question cases are cured which once were not.

MEDICAL ETHICS AND MEDICAL ETIQUETTE: An Ethical Symposium, being a series of papers concerning medical ethics and etiquette from the liberal standpoint. By Alfred C. Post, William S. Ely, S. Oakley Vanderpoel, Lewis S. Pilcher, Thomas Hun, William C. Wey, John Ordronaux, Daniel B. St. John Roosa, Cornelius R. Agnew, Abraham Jacobi, and H. R. Hopkins, with an appendix. Published by G. P. Putnam's Sons, New York, 1883. For sale by Sheehan & Co., Ann Arbor, Michigan.

The collection of papers presented in this little volume is a series of statements by the different writers giving their reasons why they believe the re-enactment of the old code in New York, would be injurious to the interests of the profession, and of the community, which it is the duty of the profession to serve. The action of the Medical Society of the State of New York, in modifying its code of ethics, has led to warm discussion and criticism. Some of it has been unfavorable because the critics have not always been in a fair position to judge of the reasons why the change was desirable. The object of this book, therefore, is to place before the reader, the motives which induced a large number of the medical men of the State of New York, to dissent from some of the rules, which have hitherto controlled and guided them in their intercourse with themselves and the public.

RETAIL DRUGGIST'S DIARY AND WANT BOOK: Frederick Stearns & Co., Detroit, Michigan, U. S. A., 1884.

This book contains sixteen pages of important tables and scientific information, a diary with space for each day of the year, want book for entering wants and purchases. It also contains ninety-four pages, priced pharmaceutical catalogue, with eight hundred and seventy-four illustrations, and eighty pages, priced catalogue of non-secret medicines. The latter part of the book is worthy of special mention. There is a legitimate demand for domestic remedies to be used without the advice of a physician. If the people are provided with standard remedies, the constituents and proportions of which are fairly given, it will soon come that they will not purchase medicines

to take unless their contents are known. This seems to be the only rational method for the suppression of nostrum quackery. Altogether this is a very neat volume and will certainly prove valuable to the retail druggist to whom it is gratuitously furnished by the publishers.

CAULK'S DENTAL ANNUAL: Edited and published by L. D. Caulk D. D. S., Camden, Delaware.

Its object is to collect and tabulate statistics of every character relating to the practice and business of dentistry. It contains tables showing: Number of dentists, dealers and manufacturers in each State, State dental laws, dental colleges of the United States, dental patents issued in 1883, dental societies of the United States, dental periodicals, and a number of original articles. The *Annual* is a compilation of much useful information that will be appreciated by all progressive dentists.

THE ARCHIVES OF PEDIATRICS: Edited by William Perry Watson, A. M., M. D., Physician for Diseases of Children to the Central Dispensary and Assistant to Christ Hospital, Jersey City, New Jersey.

This is a new monthly journal devoted to the "Diseases of Infants and Children." It has the promise of original articles, clinical lectures, etc., from the prominent writers and teachers on this specialty in this country and Europe. It claims to be the only medical journal in the English language published exclusively in the interests of the medical profession; no advertisements being seen on its pages.

MEDICAL DIGEST.

THE LESS OBVIOUS SYMPTOMS OF GASTRIC ULCER.

The frequency with which ulcer of the stomach occurs, though indicated by dissections of the dead, and taught, moreover, by several writers, is perhaps not duly realized, and it is probable that from time to time the absence or the want of salience of some of the well-known symptoms in this affection leads to imperfect observation of the case, and in consequence to erroneous diagnosis and ineffectual treatment.

In the mass of instances, both in hospital and private practice usually relegated to the large category of dyspepsia there are many where careful observation and inquiry into past symptoms suggest the probably causative influence of gastric ulcer.

Apart from the significant occurrence of rapidly fatal perforation, sometimes without any premonitory complaint what-

ever, which should have its important clinical lesson for all, and the frequent discovery of healed ulcers in the postmortem room, careful observation of symptoms and a little scientific use of the imagination seem to lend great force to the teaching which emphasizes the part played in so-called dyspepsia by this curious affection of the stomach. It would not appear necessary in these cases that the complaint of severe pain should be made; though much stress should be laid on its more or less definite localization, and time of occurrence in relation to taking food. It would be surprising to those who may not have paid much attention to this subject to learn that in an extremely large number of the very common complaints of pain between the shoulders at a certain definite spot, or, more rarely, of a similar pain at the epigastrium, which are of constant occurrence in the out-patient room, very definite and indubitable histories of considerable vomiting of blood can be obtained, though often this symptom has either been so remote in time or, if repeated, so slight in degree that the patients do not spontaneously complain of or report it. These cases are probably too frequently put down to "gastritis" or "gastric catarrh," and, even more vaguely, when the pain and general disturbance are but slight, to that refuge of diagnostic doubt, "dyspepsia," or are looked upon as solely and directly due to improper feeding. It must be remembered that the kind of complaint under consideration—the definite *inter-scapular* pain, the "sinking," etc.,—although familiar to those whose work is among the lower orders, is but rarely made by the more well-to-do, whose many and variegated dyspeptic maladies are directly traceable to what and how they eat and drink. Such cases of indigestion, on the other hand, and such troublesome cases—from the point of view of treatment—as are so often met with among the higher classes, occur but rarely among the lower, where, in the few instances taking place outside the circle of tea and alcohol-dyspepsia, and often in these as well, a cure can generally soon be wrought. But, it is by the lower classes, and by women especially, that the definite complaint of interscapular or epigastric pain is so often made; and among them too is admittedly found the greatest incidence of gastric ulcer, as evidence by unquestionably marked symptoms during life or by examination after death. It may be interesting, perhaps, to remember in this contest that the greater frequency of pain between the shoulders than "at the pit of the stomach" may have some connection with the more favorite seat of gastric ulcer on the posterior aspect of the organ, and that the locality of the cause of the pain may be hinted at by the frequently beneficial effect of a sinapism placed *in situ*. These remarks may be applied as well to cases where no history of hæmatemesis can be obtained, or even where it can be excluded. Many instances of gastric ulcer undoubtedly occur

without hemorrhage, as especially shown by the rapidly perforating ulcers in the anterior wall of the stomach, unchecked in their fatal course by any adhesion to other organs. One practical and additional aid in the diagnosis of the obscurer cases of this affection is the condition of the tongue, which is but rarely coated or furred as it would be were the gastric affection, if accompanied by equal pain, either diffuse inflammation or malignant growth. The reasonable hypothesis of the great clinical frequency of gastric ulcer will often lead to success in treatment after many dietetic changes and many drugs have failed; for it points to as near an approach to *perfect rest* of the stomach as possible to semi-starvation sometimes for a while, or even rectal feeding, in cases before any alarm of danger arises. Such treatment will occasionally work apparent wonders, and may serve also to support the diagnosis in the mind of the doubter, when he finds that on a speedy return to ordinary food the patient's pain may often be long in recurring, or may never be heard of again.—*Medical Times and Gazette.*

THE BRAIN GAUGE.

Among the interesting minor points touched upon at the recent meeting of the British Association, was that of the relation and constant ratio existing between the size and capacity of the skull in different races, and the dimension of the adult female pelvis. The conjugate diameter of the pelvic brim of the mother, it was explained, acts as a gauge of the potential brain-power of the off-spring, by forbidding the passage into independent existence of any child having a skull, and therefore a brain of disproportionate size. This is a fair and rational conclusion, and is fully borne out by the facts and figures regarding still-birth which have been placed on record by various observers. Thus it was shown by Sir James Simpson that the heads of male children measure, on an average, about half an inch more in circumference than those of females, and that in consequence, a larger number of male than of female foetal skulls are denied a passage by the maternal pelvis, causing a considerable numerical excess of male over female still-born infants. It has been shown also, with sufficient clearness, that broadly speaking, the size and weight of the brain, and therefore, the external measurements of the skull containing it, may be taken as a measure of the intellectual power of the individual. There is a philosophical interest attaching to these conclusions, which does not perhaps appear quite on the surface. The bony frame, or diameter of the maternal pelvis, is thus made to serve as a direct measure and means of limitation of the mental capacity. It follows that it is impossible that any race or family should develop exaggerated or phenomenal brain power as to cause a deterioration or puny calibre of the osseous and muscular sys-

tems. For the pelvis becoming contracted and ill-developed as the brain and skull became overgrown, the former would gradually exclude the passage of the latter, and the over intellectual race with disproportionate cerebral power, produced at the expense of the physical forces, would rapidly become extinct. The converse of this proposition would hold equally good and the large maternal pelvis, acting, as before, as the gauge of the intellectual power of the offspring, the mother possessing the best physical conformation would become the only possible parent of the son gifted with the largest cerebral development. Intelligent natural selection would lead thus to the choice by men of massive intellect (who might be desirous of reproducing their mental attributes in their children or wives) in whom the roomy and expansive physical type should afford the best chance of the large and highly organized foetal brain passing the gauge. It is perhaps to be regretted that the question of the improvement of the human race by a process of rational, as opposed to natural, selection is one more of theoretical philosophy than of practical possibility.—*Medical Times and Gazette*.

ON THE OPERATIVE TREATMENT OF CANCER OF THE BREAST.

The subject of operative treatment of cancer of the breast was one of those discussed at the recent congress of German surgeons held at Berlin. It was introduced by Professor Küster, whose main contention was that not only should operation be performed as early and freely as possible, but that in all cases, as an essential part of the operation, the axillary glands should be completely removed. He had himself thus operated in one hundred and seventeen cases, although in a large proportion of them he was unable to detect before operation any enlargement of the lymphatic glands. In only two cases, however, were these glands found free from at any rate commencing cancerous disease, when thoroughly examined. Professor Küster's mortality in these cases has been 15.15 per cent. which is just below the mean mortality as shown by the recent tables concerning this operation. On the other hand it is to be noted that Professor Küster claimed to have cured 26.22 per cent. of his cases—all cases in which there was no recurrence of the disease for three years after the operation being reckoned in the category of cures. This mode of operating involves no new principle. It is now generally recognized that no operation for the removal of any malignant growth is to be undertaken unless the surgeon contemplates being able to remove all the affected tissues. But what Professor Küster's facts show most conclusively is that the absence of palpable enlargement of the lymphatic glands is no evidence of their freedom from malignant infection, and that in all cases of cancer of the breast presenting themselves for opera-

tion, the lymphatic glands in the axilla must be regarded as infected, and treated as such.

Two other measures were discussed on which there was not unanimity of opinion, and in reference to which we lean to the side of conservatism. Professor Gussenbauer recommended the removal of the supra-clavicular glands as well as the axillary; but Professor Langenbeck and Bergmann both spoke against this practice. A complete removal of these is certainly a dangerous procedure, far more so than is that of the axillary glands, and when the disease has involved them it is very quickly carried also to other and utterly inaccessible organs. So that this step not only exposes the patient to some considerable risk, but fails to offer any sufficient compensatory advantage. Professor Esmarch stated that when the axillary glands are so matted to the axillary vessels and nerves as to be incapable of enucleation, he considered it justifiable to disarticulate at the shoulder. And in this counsel he was supported by Professor Langenbeck, who cited his experience of this kind in which, instead of amputating the limb, he had excised the nerves and vessels. One died from gangrene of the arm, one died with relapse, and one remained well up to the time of congress.

The disarticulation of the limb is an extremely severe measure and a painful mutilation, and the results of operation for cancer of the mamma—even the most radical—are not so favorable in ensuing freedom from recurrence as to warrant such a step. Further, when the infiltration of the axillary glands has proceeded so far that they are inseparably matted to the adjacent vessels and nerves, the probability that there is still further inspection of internal organs amounts almost to a certainty, and we cannot think that any departure from the rule which is usually observed in this country, and which declares that in all cases where the axillary glands are so much involved that their entire removal is impracticable, no operation should be undertaken, will be for the welfare of patients.

APPLICATION FOR WARTS.

Dr. Cordes, of Geneva, states (*Journal de Thérapeutique*, October 25) that he has always found the following application successful: Iodine, six, crystallized carbolic acid, twenty-one, and alcohol two parts and a half by weight. After scraping the wart or cutting it down to a level with the skin (without causing it to bleed) he touches the wart with a few drops of the above solution; in a minute it becomes soft, and allows of another scraping and a new application; and sometimes even a third scraping and application can be made without causing bleeding.—*Medical Times and Gazette*.

UTERINE MILK.

A recent number of the *Zeitschrift für Geburtshülfe und Gynäkologie* contains an article by Dr. G. von Hoffman, of Wiesbaden, in support of the doctrine advocated by Erevlani, and to a certain extent by Dr. Braxton Hicks, namely, that the foetal villi in the placenta do not float naked in the maternal blood, but are surrounded by cells whose function it is to secrete a special fluid serving for the nutrition of the foetus, and called uterine milk. Dr. von Hoffman believes that he has been able to extract this fluid from the human placenta. His method is simply this: He takes a quite fresh placenta, which has not been allowed to come into contact with water, and lays it with its maternal side uppermost. A cotyledon, the integrity of which has not been damaged, is then selected and carefully dried with a sponge or towel, so that no blood adheres to it, and into it a capillary tube is then pressed, so that it may penetrate about one-third or half an inch. The tube thus used pushes the villi aside, and lies in the inter-villal space. It is important in inserting the instrument to see that no blood vessels are injured by it, lest blood be effused between the villi. When a capillary tube is employed in this manner it sucks up the fluid from the inter-villal space [that is, the uterine milk], which can then be collected and examined. Dr. von Hoffman has examined the fluid from about forty placentæ, some at term, others from cases of abortion at different months. Microscopically, he finds in it the following constituents:

(1) Red blood corpuscles of different sizes and depths of color, often, especially in placentæ of the earlier months, with little or no tendency to aggregate into rouleaux.

(2) White corpuscles.

(3) The chief structures contained are what the author calls "uterine milk globules," peculiar, clear, round globules, having a very thin, feebly refracting wall, on the average about as large as white corpuscles, but varying from a tenth of, to twice their size. These bodies precisely resemble those seen in "uterine milk" obtained from the placenta of the cow.

(4) Clear watery inter-cellular fluid. The above described "uterine milk globules" are present in such numbers that Dr. von Hoffman calculates that each cubic millimetre of the fluid contains 180,000 to 200,000 of them.

(5) There are also found free decidual cells and pigmentary molecules, granules, and flakes of different shapes and sizes, which our author regards as products of the disintegration of red blood-corpuscles. Fluid, such as this, Dr. von Hoffman states can be extracted from every healthy placenta; if it is wanting the placenta is not healthy. He believes, moreover, that he has traced the mode of formation of these "uterine milk globules" from decidual cells, and the production of the

large decidual cells from many nucleated "giant cells" of the decidua. Dr. von Hoffman's views as to the physiology of foetal nutrition are summed up in the following propositions:

(1) The general office of the decidua, both in animals and in man, is to supply the foetus during its intra-uterine life with a part of the nutritive material necessary for its growth. To fulfill this function the decidua serotina becomes a special milk-secreting organ, which, after the birth of the child, is expelled with, and as an integral part of the placenta.

(2) The secretion of this organ, the so-called "uterine milk," is separated into gradually formed spaces, in which lie the placental tufts. Here the uterine milk is mixed with maternal blood, which is at the same time extravasated, and together with it forms the material for nutrition of the foetus, this material being only suited for absorption by the placental villi when these changes have taken place.

(3) From the point of view of the comparative anatomist, it can no longer be maintained that there is any essential difference in this respect between the placenta of man and the higher animals. Dr. von Hoffman promises a further communication in which he will elucidate the mode in which this uterine milk is absorbed by the placental tufts.—*Medical Times and Gazette*.

THREE INFECTIOUS DISEASES IN THE SAME INDIVIDUAL.

Dr. Prior reports (*Deutsche Med. Wochenschrift*) a case in which three infectious diseases occurred in the same individual in the space of one month. Three children were attended on November 18 for well-marked scarlatina, with a temperature of 104° Fahrenheit, copious eruption and some difficulty of swallowing. Desquamation began on November 21 and proceeded normally, only one child having slight renal symptoms, until, on December 1, the two younger were attacked with rigors, headache, malaise, and on the following day were covered with a thick eruption of varicella. On December 3, in the absence of the mother, a child from the next room, intercourse with which had been carefully avoided on account of measles, was found playing with the children, and showed signs of measles next day. The first patients were now carefully watched and on December 13 the temperature was found to be raised, with photophobia and a slight coryza; on the 15th the eruption of morbilli appeared. Its course was protracted and caused some anxiety; but finally the children recovered. The cases show how the two poisons of scarlatina and varicella may be in the organism at the same time, and how measles may be conveyed by a two hours' intercourse in the prodromal stage, while the crusts of varicella are still present, the measles showing itself as soon as ten days later.—*Medical Record*.

EXTRACT FROM A CLINICAL LECTURE ON TOBACCO POISONING.

In this connection let me relate to you a case which is instructive, although not so well authenticated, as to detail, as I could wish. I had the narrative from a medical man of great intelligence, who was himself the subject of it. He told me that some years before I saw him, he had for some months been "nearly blind." He lost reading power and "could scarcely recognize his friends." He consulted, separately, four distinguished ophthalmic surgeons. One said that he could find nothing amiss, but gave a gloomy prognosis. Another thought the optic discs pale, and another, that all that he could see were unusually large physiological cups. Two conjured him not to smoke; a third said that he might smoke as much as he liked, and another omitted giving any opinion. He had been smoking very heavily, and drinking very moderately. The failure began whilst on a visit to Germany where he had smoked still more than usual, but a mild tobacco. In spite of the advice given him he did not, as he says, in any way diminish his smoking. He took strychnia until his muscles jumped, but was no better. On one occasion whilst at his worst he dined with a friend and "took quite as much champagne as a respectable person ought to do." This was against his regular habit, which was to be abstemious in wine. The result was that when he reached his home after the dinner, he found, to his delight, that he could read small print. In the morning, however, his sight was as bad as ever. At length he consulted a fifth specialist, who ordered him small doses of opium. Finding some, but not all the benefit he desired, he took not small doses but large ones, and had the good fortune to have his vision steadily improve, until he could see again almost perfectly. He had some difficulty in leaving off his opium but gradually diminishing the dose he at length did so. Now Dr.—assured me that he knew of no cause for this attack of amaurosis, nor of any explanation of its cure excepting that assigned. He had been in good health all the time, and neither before nor since had he suffered from any indications of nervous exhaustion. He was not overworked, nor subjected to any mental distress. You will see that I have no accurate information as to the degree to which the amblyopia had proceeded, nor excepting from what he remembered as to the exact state of his discs. Still the case fits very closely indeed with the facts with which we have been familiar in a hundred instances of so-called tobacco-amaurosis. I have seen many a patient affected in just the same way improve immediately and permanently on leaving off smoking. But here we are assured there had been no diminution whatever at any time. Let me say here that my patient was a man clearly fond of pictorial effect and he may

have unconsciously exaggerated. It may have been that he did reduce his quantity or quality. It may have been that he indulged to very great excess before the outbreak, or that there was something in the German tobacco which he got, which specially poisoned him. I incline, however, rather to the belief that we have here an instance of one drug efficiently counteracting the ill-influence of the other. The opium perhaps relaxed the set of blood-vessels which the tobacco had thrown into spasm. This suggestion is in keeping with what was noted after the champagne dinner. I have known many cases in which the subjects of smoker's amblyopia recovered perfectly although they never left off smoking; and of those who had given it up for a time. I do not know that I ever once witnessed a relapse when the habit was, as it always is, resumed. It may be thought that such facts go against the belief that tobacco has anything to do with it, and that this is made almost a certainty by such a case as that which I have just related. For myself I do not think so. Show me parallel cases occurring in those who do not smoke. It is possible even that one or two of such might be produced, but they are infinitely rare; whilst in heavy smokers, this form of transitory amaurosis is an every day occurrence. If cases were forthcoming in which there had been no smoking, my reasoning would be this: There is probably a form of nerve disorder, perhaps a passing neuritis, perhaps only a vascular ischæmia, which may be induced by exciting causes of the precise nature of which we know nothing, but concerning which it is still in the highest degree probable that something acts as the predisposing cause. No doubt there is idiosyncrasy in the furthest background; as a middle stage the long-continued habit of smoking, and lastly some unrecognized influence,—some depression of nervous tissue, perhaps,—which determines the attack. The final exciting cause may in some cases be important, and in many it may perhaps be absent, the tobacco being in itself sufficient.

You will see that these conjectures open to us a very interesting chapter in reference to the influence of drugs in general, especially of those drugs which we give over long periods of time and of those which become, with many persons, articles of ordinary use quite independent of medical prescription. We do not know but what other articles of which the chief influence is upon the nervous system may, after long continuance produce injurious results. We can by no means safely assume that because a nervine stimulant is borne with impunity, or even with apparent advantage, that therefore it is wholly innocuous. It may be that its use involves the risk of very peculiar and wholly unexpected disorders. In the light of this conjecture we ought to examine as to all that is possible in reference to the different kinds of wines, tea, coffee, hops, quinine, absinthe, chamomile and many others. I shall ask

you presently to observe the facts as to the connection between arsenic and attacks of herpes zoster, facts which are, let me say, somewhat similar to those in reference to tobacco and attacks of amblyopia. Before proceeding to this subject I wish to take an illustration from an article which comes into the diet category. The study of drugs is often sufficiently difficult, but that of diet is surrounded by peculiar fallacies. Especially we must remember that both in prescribing and in feeding, combination is often everything. A thing which might have agreed well alone, may poison when taken with something else, or conversely, that which alone would certainly have disagreed, may go all right with its proper adjunct. If you put tannin with your tobacco, a man wholly unaccustomed to smoking may take a pipe with impunity. So also camphor counteracts the effect of tobacco, and belladonna prevents the headache from opium. Not only must we keep in mind, in all questions of diet, the possible influence of some unremembered combination, but we must bear in mind, that the state of the individual varies at different times. Most of our patients are marvellously unobservant in these matters, or, rather, observe in a hurry, miss out facts, and arrive often very confidently at most erroneous impressions. Sometimes, however, we chance upon an acute and careful witness as to his own health and the things which help or hurt him. When such is found, prize him and listen in patience to his narrative. I have told you in a former lecture how in respect to "egg poisoning" it is often unsuspected by the patient, and how also in some cases it is only in certain conditions of health and under certain circumstances that eggs do disagree. Now just the same is true of tea and coffee, they will agree under certain conditions, and not under others. The man to whom tea has appeared for years to be an essential of comfortable existence, may suddenly find himself compelled to abstain from it. It may be that slowly this beverage has itself induced a change in the state of the nervous system; but it may also be that some other change of diet has taken place, or perhaps that it is a mere result of advance in age.—Mr. Hutchinson from *Medical Times*.

CHLORATE OF POTASH POISONING.

Drs. Broesicke and Schadewald report a case (*Berl. Klin. Woch.*, Number XLII, 1883) of rapid poisoning by chlorate of potash in a healthy young man, aged twenty-two. After excessive and incautious gargling with a strong solution for some trifling throat affection, in the course of which he had swallowed a considerable quantity, the patient complained on the following day of sickness and of pain in the sides and loins. Signs of acute gastritis rapidly followed; nausea and some pain in the splenic region were the chief symptoms. Some enlargement of the

spleen could be detected. Heart and lungs were normal; but distinct cyanosis, especially of the lips and extremities were present. Two days after the poisoning, severe vomiting set in and lasted to the end. Icterus followed, but disappeared before death. On the fourth day, severe epistaxis occurred; extreme præcordial anxiety followed, but without any notable signs in heart or lungs; and some rigidity of the muscles of the extremities was observed. Death took place on the eighth day. Throughout the whole period of illness hardly any urine was passed; the temperature remained a little below the normal; the pulse however was of fair strength. The postmortem examination, made four days after death, revealed a brown discoloration of the blood in the vessels. This blood, however, gave the normal appearance to the spectroscope. The spleen was very greatly enlarged, brownish in places, the capsule soft. The kidneys were also enlarged, the cortical portions expanded and of a dirty green color. Microscopically, the straight and convoluted tubules were found filled with numerous brownish, irregular-shaped masses of hemoglobin. The stomach showed acute and chronic catarrh, with a few ecchynoses. The large intestine and rectum contained a large quantity of brownish, watery fluid and the mucous membrane appeared oedematous. Other organs normal.

MISCELLANEOUS ITEMS.

THE Free Hospital for Women, Boston, has received a gift of \$35,000 from Mrs. Oliver Ames.

A MARTYR TO SCIENCE.—Dr. Thiullet, a member of the Pasteur Scientific Mission, sent to investigate the Egyptian cholera, fell a victim to the scourge.

CREMATION IN BOSTON.—A cremation society has been organized in Boston, and it is said that authority will soon be asked to establish a crematory in the vicinity.

THE immense crematory at Rome is in almost daily use. Cremation is becoming daily more popular and bids fair soon to dispose of more corpses in the Italian capital than old-fashioned burials.

A BUREAU OF ANNUAL INDUSTRY.—Under this title a board is proposed in a bill lately introduced into Congress, the function of which shall be to prevent the exportation of diseased meat and to provide for the extermination of the infectious diseases of cattle.

A STATE Board of Health has been created in Missouri under an act similar to that of Illinois.

EGYPTIAN rags are likely to be subjected to inspection at the hands of American sanitary officials prior to their leaving Egypt.

THE LATE DR. J. MARION SIMS.—It is announced that a former patient of Dr. Sims will give a bronze bust of the deceased surgeon, to be deposited in the new building occupied by the Harvard Medical School.

J. B. Cox, M. D., of Saint Genevieve, Missouri, says: "For female diseases Harter's Iron Tonic is par excellence. The combination is well adapted to anæmia accompanied with dysmenorrhœa, the good results being attributed to the iron, phosphorus and viburnum."

PROFESSOR C. C. F. GAY, of Niagara University, Buffalo, New York, in speaking of Nitrogenized Iron, prepared by Chapman, Green & Co., of Chicago, says: "I have used it in my practice. It is an elegant preparation, agreeable to the palate. . . . I see no reason why it may not supersede most of the ferruginous preparations."

A BILL has been introduced into the United States Senate providing for the establishment of a "University of Medicine." To support this proposed institution an appropriation of a million dollars is contemplated as an endowment fund. "Allopathic, homœopathic and eclectic methods are all to be represented by professorships."

THE PHYSIOLOGICAL ACTION OF COFFEE.—Messrs. Couty and Gumaraës conclude after making a number of experiments to ascertain the exact physiological action of coffee, that it is not a preventer of consumption of tissue. While this is true that coffee does not, by any direct action of its own, maintain nutrition, it may indirectly, by stimulating assimilation through improving the appetite.

TREATMENT FOR CHAPPED HANDS AND FROSTED FEET.—At a meeting of the Philadelphia County Medical Society, held November 21, 1883, Dr. Carl Seiler called attention to the value of tincture of benzoin in the treatment of chapped hands and frosted feet. He had used it in a number of cases, with much success. It is applied by simply painting it on the skin. The stockings may be prevented from sticking to the feet by rubbing some oil over the benzoin.—*Polyclinic*.

THE GARFIELD MEMORIAL HOSPITAL.—At a recent meeting of the incorporators it was announced that the total cost of the property, together with the sums thus far authorized to be expended for improvements, would amount to \$49,500, and that a suit in connection with an estate, until lately pending in Philadelphia, had been decided in such a manner that the hospital had come into possession of the funds at issue. A board of directors was elected, including Dr. Samuel C. Busey, of Washington, and Dr. John S. Billings, of the army.

DR. ROCHARD, Medical Director of the French marine, who some weeks since received at the hands of a lunatic a gunshot wound in the lung, which for some time caused grave apprehensions, has since made an interrupted recovery, so that he was enabled at the last meeting of the Académie de Médecine to thank his colleagues personally for the great interest they had taken in his progress, and to inform them that he had so completely recovered, that, "all that remained to him of this adventure was a small piece of lead in the right lung, and great gratitude in his heart."

NÆVUS TREATED SUCCESSFULLY BY LOCAL APPLICATION OF LIQUOR ARSENICALIS.—Meeting with the objections naturally made by mothers to the use of knife or puncture for the removal of nævi, Dr. W. J. Beatty (*British Medical Journal*) was led to try local applications of the ordinary liquor arsenicalis, with perfect success. Eight cases have been perfectly and painlessly cured by the application of the remedy. His method is to paint the nævus night and morning with the liquor until suppuration takes place. The cure being affected in from three to five weeks.

TREATMENT OF SOFT CHANCRE AND BUBOES BY SALICYLIC ACID—The efficacy of salicylic acid in the treatment of soft chancre and of buboes appears to us to be unquestionable. While not an absolute specific, it is in our opinion, capable of being most advantageously employed. Odorless, only slightly painful in its application, soluble in alcohol and in glycerine and leaves no stain on linen, it is preferable, in these important respects, to most other agents employed for the cure of the above named affections. While perhaps inferior in certain other particulars to some among its rivals.—*Journal of Cutaneous and Venereal Diseases*.

SUGAR AS FOOD.—The *Deutsch-Amerikanische Apotheker Zeitung* (December 1, 1883), gives a note by Dr. Phipson, on sugar as a regular article of diet. Dr. Phipson very sensibly opposes the general prejudice against sugar. He declares that he has, dur-

ing forty years, eaten very largely of it, at least a quarter of a pound daily, not counting the sugar-forming substances taken at the same time. During all this time he has not been under the necessity of taking medicine, and has not suffered from any complaint, except brief attacks which could be traced to irregularities in eating or in dress. He declares that the condition of men would be much improved if the use of sugar would substitute that of alcohol.—*Polyclinic*.

TONGALINE.—We wish to call the attention of our readers to this remedy. Having a case of neuralgia recently which did not improve under the ordinary treatment, we had Messrs. Bush & Co., order some togaline for us, which we gave to our patient. It acted admirably, relieving the pain before many doses had been taken. Since then we have had occasion to prescribe it again and with the same good results. We believe tongaline is destined to become the remedy for neuralgia. The testimonials from noted physicians and surgeons tend to strengthen the prediction. Try tongaline and you will thank us for the suggestion.—Extract from the January (1884) number of the *Eastern Medical Journal*, Worcester, Massachusetts.

VESICATION IN DIPHTHERIA.—Dr. W. F. Bartlett, of Buffalo, New York, communicates to the *Therapeutic Gazette*, for December, the results of his experience in the use of cantharidal blisters in diphtheria. His plan is to apply the blister immediately on the appearance of the exudate in the throat. The theory is that the materies morbi is eliminated through the blistered surface, while the counter-irritation thus caused relieves also the engorged pharyngeal surfaces. He regards the exudate in the throat as merely an announcement of the presence of the poison in the blood, and that from the nature of the epithelium or impinging of inspired air primarily upon those surfaces, the partial elimination of the morbid element is accomplished.

CORROSIVE SUBLIMATE IN GONORRHOEA.—Dr. Joseph McChesney, of Deming, New Mexico, contributes to the *Therapeutic Gazette*, for December, a report of a series of seven cases of gonorrhœa in which he employed by way of treatment, only a solution of corrosive sublimate, one grain to six ounces of water. The results are already very surprising. In several of these cases this injection was resorted to after a long and unsuccessful course with the ordinary remedies in such cases, and the result was uniform success. He resorts to these injections, which he gives once every four hours, after the subsidence of the acute stage. He is very confident that properly applied this solution will effect a cure of the gonorrhœa within from eight to ten days after it has been resorted to.

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ORIGINAL ARTICLES.

INFANTILE CONVULSIONS.

BY W. J. MADDOX, M. D., DAYTON, OHIO.

The physician ought to be much gratified and pleased at his being able to bring one of these little ones safely back to health. I shall briefly touch upon the causes of this disease. The physician should diligently inquire into the previous condition of the patient as to whether he or she has showed any of the symptoms of entozoa. Three-fourths of the cases of infantile convulsions that I have had, have been caused by entozoa. The most common of the entozoa are the ascaris lumbricoides.

Causes are entozoa, constipation of the bowels, indigestion, irritation of the gums in teething, and excitement of the brain as by fright, and also many of the acute and chronic diseases to which infancy are subject, have convulsions either as a symptom or as a complication, such as scarlet fever, whooping-cough, meningitis, cholera infantum, etc.

Symptoms are either great restlessness, fretfulness or gritting of the teeth in sleep, twitching of the muscles of the face, rigidity of the body, twitching movements of the body. The head and neck drawn back, the limbs being flexed and extended. In some cases the movements are confined to certain muscles of the body or limited to one side; the limbs move but little, the countenance is affected, the eyes have an unnatural expression or roll spasmodically, and the body more or less rigid. Con-

sciousness is always absent during an attack. The eyes though open do not respond by closing or winking when the finger is passed over them. The pupil is either dilated or contracted and always immovable. The skin wet with a cold and clammy perspiration. When this has lasted for a few minutes the convulsion passes off and the patient either becomes conscious and gradually gains its health or relapses into another spasm after an interval of conscious or unconscious quiet which interval may last for hours. When the patient becomes conscious after a convulsion it is very much bewildered and the least scare or fright until this bewilderment passes off, will have a tendency to throw the patient into another. When the convulsion is caused by entozoa there will be a peculiar wormy smell about the breath. The breath will smell just as the common fish worm does. Some physicians, I might state here descry that children are subject to worms, and others state that you can not tell decidedly that the patient is troubled with entozoa until worms are passed, but in my experience I have always found that the breath is a good adjunct in diagnosing this cause of infantile convulsions and invariably found where this peculiar wormy smell was, that the patient was troubled with entozoa. I shall now proceed to the treatment, first taking that caused by entozoa. After having decided that it is from this cause, I proceed to arrest or stop the convulsion, which I do by the following:

R. Hydrate chloral.....	grs. xx.
Kali bromidi.....	grs. xxx.
Aquæ destil.....	3j

M. Et Sig. To a child under three years old and over, a teaspoonful every two hours.

For the removing of the entozoa I give oil of ricini and oil of terebinthinæ of each one-half ounce, ten drops three times a day. I have found that after using this in conjunction with hydrate of chloral and bromide of kali mixture, that I have never to make more than two visits when I will find the child on a fair road to recovery. I should keep up the oil of ricini and terebinthinæ as long as the child continues to show any signs of entozoa. Thoroughly eradicate this cause at once and it may be months before there will be another attack or there may not occur another convulsion from this cause. I do not mean to say that once getting rid of the entozoa that the patient will never be troubled again.

Constipation of the Bowels.—Where it is caused from this trouble I would give some mild cathartic, such as broken doses of rochelle or epsom salts, magnesia, castor oil, sweet oil, etc.

Irritation of Gums in Teething.—The best thing to do is to lance the gums down to the coming tooth.

Excitement of the Brain.—I should apply to the back, epigastrium, and legs, mustard plasters, and if the fit is protracted, should cup the back of the neck, and employ warm baths

holding up the head while the body is immersed. In addition I would use the hydrate of chloral and bromide of kali.

Indigestion.—When there is great irritability of the stomach and the stomach rejects food and medicine, I would give the following:

R. Lacto-Peptide.....	grs. xlvij.
Sodæ bicarbonatis.....	grs. xl.
Bismuth sub-nit.....	grs. xxxvj.
Aquæ Fontana.....	3j

M. Shake before using. Et. Sig. Teaspoonful every hour until vomiting is checked. Then give milk and lime water.

In conclusion let me say, under no consideration would I bleed a patient in this disease. If a physician should have to resort to bleeding, then let him only take a strong, vigorous patient, and then only take a very moderate quantity of blood away from him. I shall not in this paper speak of convulsions either as a symptom or as a complication of any other disease. I hope that the few ideas which I have hurriedly drawn together will be of some benefit.

URÆMIA RESULTING FROM ACUTE HEPATITIS.

BY GEORGE H. CLEVELAND, M. D., LANSING, MICHIGAN.

"The term uræmia is applied to a group of nervous symptoms which occasionally occur in the course of acute, or chronic renal disease, and in other affections prevent the secretion, or the discharge of the urine." In the case I shall present there was no retention, or suppression of urine, and but a slight, and very indefinite history of urinary affection.

A. F., a German, aged forty, laborer, married and has a family moderately intemperate, strong constitution. He received five wounds in the civil war, and gives a history of some pain in hepatic region for some time back, has chronic diarrhœa though not excessive. Skin dark colored, though not yellowish, or sallow, sclerotic normal, has had frequent headaches, since last summer (1883) has had some difficulty with the urine, frequently noticing a slight deposit, and the quantity he thought sometimes decreased, but not sufficient to give any trouble, and he paid no attention to it. He has no pain through the kidney region, and has suffered from no acute affection of any kind for many years. No hereditary tendency whatever. So much for past history.

When first called I found this man suffering from anasarca, and pulmonary cedema characterized by intense dyspnœa, with spasmodic "retching" cough, causing pain through chest, also considerable pain in hepatic region. Upon auscultation, I could determine abundant moist *râles* throughout lungs. Cardiac sounds normal. By gentle percussion, and examination I found the liver somewhat enlarged, and very sensitive. I gave

the urine a careful examination, but could get no traces of albumen. Pulse 55, strong and regular; pupils slightly contracted, temperature normal. Prescribed a brisk cathartic at once, and extract digitalis two drops every four hours, alternating with

R. Opii et ipecac co.,
Quinæ sulph..... ää gr. v.

also gave a stimulating expectorant mixture, ordered counter irritation over liver. Upon this treatment the patient gained very materially for two or three days.

Sunday, December 30: I received word that my patient was feeling so well that he would not require my attention that morning, but was however, called at 8 P. M., and found him complaining of intense cephalalgia, and pain in liver, accompanied by nausea, and vomiting, pupils contracted. I again examined the urine for albumen but could detect none. Gave him morphia sulphate, one-fourth grain, by the mouth. Was called again at 10:30 P. M., and found him very restless, and saying he "could not see anything, was not dizzy, but everything was dark." I at the time attributed this condition to the oftentimes peculiar exciting effects of morphia, and at once administered a hypodermic of one-sixth grain of morphiæ sulphate with one-one-hundred-and-twentieth grain atropiæ sulphate and remained until he was sleeping nicely. Was aroused again at 3:30 A. M., the messenger saying the patient was dying. Was soon at his bedside, and found him just recovering from a severe convulsion, tetanic spasms, opisthotonos, etc., though he was then lying quietly. Pupils contracted, respiration regular, pulse 50, could be roused with difficulty, when he would complain of intense pain in the head. Gave

R. Spirits chloroformi..... gtts xv.
Potassium bromide. 3jss.

and shortly afterwards prescribed

R. Ol. Tiglii..... gtts ij.
Magnesi carb q. s.

M. Pill No. j. Sig. To be taken at once, repeated if necessary in four hours,

also ordered vini gallici often in moderate doses, with counter irritation over liver.

In a few hours he had an alvine evacuation of black substance, followed by a large number of intensely greenish passage, which greatly relieved his condition. Twenty-four hours later his condition was vastly improved and I then prescribed the following which he continued using until his recovery:

R. Acidi hydrochl dil..... 3ij.
Ext. digitalis fl..... 10 xxx.
Spts. etheris nit..... 3j.
Infus buchü..... q. s. 3iv.

M. Signa. Teaspoonful every three (3) hours.

From this time convalescence was rapid, and at present (January 24) he considers himself as well as ever. I submit this case to the profession as an illustration of what I consider to be uræmia resulting from non-elimination of urea from the system due to acute hepatitis.

Possibly in this case an early quantitative estimation of urea in the urine would have shown a diminished elimination of that ingredient, and uric acid, due to some existing renal complication, of which there is a slight history. This would constitute a predisposition, then the advent of acute hepatitis, and the resulting cedema, and interference with the proper functions of the liver, causing in its turn a retention of urea and its toxic effects. Bartholow states that "toward the end of some cases, of sclerosis of the liver, brain symptoms arise which were at one time supposed to have the same relation to retention of effete products removed by the liver in the normal condition, as the cerebral symptoms in albuminuria had to the failure of kidney excretion." Flint thinks the toxic material in these cases, to be cholesterine and applies the term cholesteræmia to these symptoms, but these symptoms are described as taking the form of low-muttering delirium, stupor, passing into coma and death, and remember these symptoms are preceded by a well-marked history of sclerosis, occur just before death, and are of a different character from those occurring in the case presented. A subsequent careful examination of liver in this case shows no signs of contraction, or of any abnormality.

REMOVAL OF A SILVER DOLLAR FROM THE ŒSOPHAGUS WITH FORCEPS.

BY T. J. SULLIVAN, M. D., ANN ARBOR, MICHIGAN.

J. B., aged twenty-two, of M—, Michigan, came to my office, February 17, and gave the following history: On the evening of the 15th, while playing a violin for a dance, a silver dollar was placed in his mouth, which he held between his teeth for some time. An attempt was made by a third party to take the coin when the patient suddenly jerked his head backwards, which caused the coin to be thrown back into the œsophagus. He made every effort at the time to remove it, but all to no purpose. He then applied to some doctor, whose attempts to remove the body, crowded it farther down the œsophagus. Efforts were then made by the physician to force the coin into the stomach. These as well as all other attempts at its removal were futile.

Physical Examination.—On passing the fingers along the course of the œsophagus a swelling could be felt as low as the sternum and behind the trachea. Firm pressure in this region caused the patient some pain.

He was not able to swallow any solid food but could take soups and fluid substances.

The patient was seated on an ordinary chair. The base of the tongue was now well depressed with the index finger of my left hand, which also served to guide the sound that was introduced for the purpose of determining the exact position of the foreign body. The instrument met with no resistance until it had reached the level of the upper part of the sternum. The body now definitely located, the instrument was withdrawn, and oesophageal forceps introduced. It was with some difficulty that the coin was grasped firmly enough to be removed. When a favorable hold was obtained, by a steady rotary movement the coin was withdrawn. The piece, which is now in my possession, is a silver dollar of the issue of 1881.

The patient took no anæsthetic and did not suffer any pain from the manipulations. He left the office with a smiling countenance, but with a firm resolution, to not make a pocket book of his mouth in the future.

TWO OVARIOTOMIES IN ONE DAY: BOTH SUCCESSFUL: A CLINICAL MEMORANDUM.

BY DONALD MACLEAN, M. D.

On the 17th ultimo in one of the largest and most ambitious *villages* (?) of this state I removed *three* ovaries from *two* patients and although I have not had the pleasure of seeing either of these patients from that day to this, I have the assurances of the eminent and venerable physician, Dr. Mottram, by whom the after treatment was conducted, that both of them are now in the enjoyment of perfect health.

In one of these cases the tumor was comparatively a simple one and the operation was chiefly remarkable for the ease and rapidity with which it was executed. In the other case both ovaries were cystic and had to be removed, one being large, of rapid growth, and extensively adherent. The patient was greatly worn down by pain and anxiety and had acquired the habit of using very large quantities of morphia. She was extremely despondent and reluctant to submit to an operation.

In both cases chloroform was administered; in both cases the pedicles were tied with silk ligatures and returned; in both cases the abdominal cavity was most thoroughly sponged out by the same set of sponges; in both cases the glass drainage tube was dispensed with; in both cases the simple dressings, (namely: a strip of carbolized oil silk over the incision external to that several sheets of the finest cotton wadding and over that a soft flannel bandage, firmly secured with safety pins), were untouched until the fifth day when they were opened up and all the silk sutures removed.

It was then found that in the first case the wound had healed absolutely by first intention. In the second there was a slight degree of separation of the superficial edges of the wound at the lower angles. All the rest of the wound had healed by the first intention. On the same day (the fifth) an enema was administered to each patient and with excellent effect in both cases.

From this time on the daily reports continued to be as they had always been, entirely satisfactory, and on February 2, my venerable friend wrote to me, "and now for a few last and best words about your cases here." The essential essence of these words is contained in a single line, "*entirely well and gaining strength every day.*"

I ought perhaps to mention that the first and simplest of these two cases had been examined by me some weeks previously, while the latter and more complicated one was introduced to me for the first time about one hour and thirty minutes before the operation was commenced.

To travel by rail a distance of two hundred and eighty miles, and perform two successful ovariectomies, and all within the space of twenty-four hours will be generally admitted, I think, to be a pretty fair day's work. And still I am fully aware that it is no uncommon thing for a harder day's work to be done, more urgent risks undertaken, and even more striking results to be obtained by country practitioners who are too busy or too modest, one or other, or both, to claim for themselves the credit which they so richly deserve.

P. S.—Since the above memorandum was written, I have had the pleasure of seeing both these patients in excellent health and spirits.

SULPHATE OF MORPHIA, LOCALLY IN ACUTE CORYZA.

BY HARRIET V. BILLS, M. D., EAST SAGINAW, MICHIGAN.

Starting out one morning last summer for a rather long journey, I felt the premonitory symptoms of coryza. Although the weather was decidedly warm and very fine, the vicissitudes of travel by rail, both day and night, and a ride on the seashore where the breeze was fresh, permitted sufficient exposure to add very perceptibly to the unpleasant symptoms, so that by the evening of the third day, I found myself thoroughly uncomfortable, the conjunctiva so congested that my eyes found no repose either open or closed. We were still on the cars and would not reach our destination until morning, but sleep was impossible on account of the constant attention required by my cold. In this extremity I began to look about for some means of relief, and among the few remedies at my command, I chose morphia. Taking a very small amount, probably not using

more than the sixteenth of a grain, I snuffed it up each nostril in succession and even applied a little to the conjunctiva of the lower eyelids. From the latter application I experienced for a moment considerable additional pain, but by the end of ten minutes, was conscious of very marked and blessed relief. I repeated the application once after half an hour or less, then fell asleep, passed a comfortable night and awoke next morning with hardly more than a recollection of the evening's misery.

I had previously often used morphine, combined with other substances (as subnitrate of bismuth) as a snuff in catarrhal affections, but had never obtained very definite results. I have since used it also, either dry as above or dissolved in tepid water, not every time with such surprising effect, but always with evident benefit in the acute form and early stage of the indisposition.

The unusual violence of this attack and the unhealthy character of the country through which we were passing, namely the Roman campagna, suggested to my mind the question of an endemic cause similar to those which produce the so-called hay and rose fevers, etc., but the relief after using the morphia was too prompt and decided to allow me to ascribe it to any other agency.

A SHORT METHOD OF PRESCRIPTION WRITING.

BY C. S. CASE, D. D. S.

A way of shortening the mathematical part of prescription writing has suggested itself, and while it is original so far as I am concerned, I shall be surprised if others have not applied the same principle. Its usefulness I think will be apparent, especially to beginners—like myself—who are not usually overloaded with stereotyped prescriptions that can be recalled in full, at any moment. I will put it in the form of a proposition, namely: In a prescription which it is decided shall contain a certain number of ounces, to be administered in drachm doses; wanted to know the amount of the principal or basis; the dose of which is grains, minims, or a fraction thereof. Let us review the common prescription and the usual method of obtaining the answer (so far as I can learn) merely as a comparison:

First, the number of doses is obtained by multiplying the number of ounces which the prescription contains by eight; this in turn is multiplied by the number of grains or minims that you decide to give at a dose, and finally the product, which is usually somewhere in the hundreds, is divided by sixty to reduce it to drachms.

The method which I propose for shortening this operation is as follows: First assume, if you please, a fraction whose numerator shall be the number of ounces in the prescription

and the denominator eight. This I will call for convenience the "*working fraction*," and now I will give the theorem of my proposition. Multiply the "*working fraction*" by the dose decided upon—in grains or minims—and *the product will be the answer in drachms*.

Why this is so I will not take the room to explain as any one with a little thought can readily understand. Example:

R. Morph sulph.,
Potass. iod.,
Syrp Tolu, } āā ʒij.
Glycerine, }

M S. One teaspoonful before each meal.

Wanted to know how to finish the above prescription after deciding to give the morphine one-fifteenth grain and of the iodide six grains at each dose. Example:

$4-8$ or $\frac{1}{2} \times 1-15 = 1-30$ drachms or Morph S. grs. ij.
 $\frac{1}{2} \times 6 = 3$ drachms or Pot. Iod ʒij.

Now let us suppose we have a prescription before us, similar to the one proposed and we wish to know the exact dose of its principal ingredients we have but to reverse the process, namely: invert the "*working fraction*" and multiply by the number of *drachms* in the ingredient, and the product will be the dose represented in grains or minims. For example:

$8-4$ or $2 \times 2-60 = 1-15$ or dose Morph. gr. 1-15.
 $2 \times 3 = 6$ or dose Pot. Iod. grs. vj.

This method is capable of many other short cuts that will suggest themselves. With a little practice the reader will be enabled to arrive mentally at the desired number almost immediately.

A MONSTROSITY.

BY J. R. MCCOLLOUGH, M. D., CHICAGO, ILLINOIS.

I was called at 6 P. M., January 12, 1884, to go in great haste to see Mrs. M., who was in labor with her fourth child. A midwife was with the woman, and had been with her two days and nights. I found the patient nervous and excited, with abdominal walls so distended as to excite alarm. I endeavored to palpate, but in consequence of excessive amount of liquor amnii, could not determine what portion of the fetus was anteriorly. I made digital examination and could feel a hard, sharp presenting (something) bone, so unlike any of the bones which would be contained in any presenting part of the foetal anatomy, that I could not make a diagnosis. I concluded to await developments, administered hypodermically one-fourth grain of morphine, and in view of dilatation being so slight thought it best to allow the patient to rest a while. I left her promising to return at 9:30 P. M., after my evening office hours. Upon my return I found the third stage of dilatation had arrived, mem-

brane thin enough to justify me in rupturing it, which I did, and horror of horrors, the quantity of fluid which *poured* out was just awful, I called for the chamber vessel and a cup and went to dipping it up. I filled the vessel two and a half times full, this together with what had soaked into the clothing, etc., amounted to over three gallons. The foetus responded to the contractions and gravitation. I passed the index finger far up outlining this sharp, bony projection and in order to determine what it was, where it belonged in the body that it should present itself there. I slid the finger beyond and found an abrupt promontory and abyss—then I slipped the fingers to the sides of it and discovered a well outlined ear on first one side and then the other, then I was satisfied I had a monster of the first class, as described by Dunglison, and having a natural presentation hastened to complete labor, with the left hand upon the abdomen I did some energetic kneading, while with the digital and second fingers of the other I covered the sharp bone so as to protect the soft parts of the mother—the posterior wall of vagina and perineum was in great danger of laceration—the semi-head dropped down into the cavity I elevated it and soon had it at the perineum, I brought gentle but forcible traction until I could hook the finger of left hand into the axilla, and soon had the body in my hands, upon examination, the “*promontory*” was the posterior portion of the superior longitudinal sinus, an entire absence of the vertex (vertical portion of parietal), occiput, the eyes bulged out, nose and mouth to abnormality and the chin upon the sternum, there was no throat, I found also a abnormality about the genitals—an absence of the penis, but a well defined scrotum. There was umbilical circulation, no respiration nor did I try to produce any. I made enquiry as to the cause of this deficit—if impressions, etc., but she had not during her pregnancy, seen any object to cause impressions, the only thing which could give us any suspicion as to cause was, that during the month of August last, her youngest child cried and the husband was about to rise to attend to it, when he saw the window shutter open and a man’s leg on the inside of the window sill and just bringing the other through when the husband jumped up and hollered “hold on there,” sprang for him but the burglar threw himself backward upon the piazza with a thud and escaped. This awakened the wife in alarm, she supposing her child had been stolen, she became so hysterical that her husband had to send for medical help, she was then in about the one hundred and forty-fifth day of gestation, and whether this fright was the cause of the lack of development of the brain and skull I am not prepared to determine, although I have no other means of accounting for the monstrosity. The foetus—a full term, weighed only four pounds twelve ounces when born.

GENERAL CORRESPONDENCE.

INQUIRY: ANÆSTHETICS IN LABOR.

ALBANY, WISCONSIN, February 29, 1884.

DEAR SIR: I shall be greatly indebted to you for any information you may be able to give me on the following points in relation to anæsthetics in labor, namely:

- (1) What is the best anæsthetic in such cases?
- (2) What is the effect of chloral hydrate administered previous to an anæsthetic?
- (3) Do you find that it (anæsthesia) arrests uterine contractions so as to retard the delivery of the child?
- (4) What effect does it have on the child, either before or after birth?
- (5) Does it, in your opinion, have any tendency to post-partum hemorrhage?

[The above letter was sent to us by W. E. Ziegenfuss, M. D., who desires the readers of THE PHYSICIAN AND SURGEON to give him any information which they may be able to communicate on the contained questions. Those contributing will receive a copy of his investigations.—EDITOR.]

OUR CHICAGO LETTER.

CHICAGO, February 25, 1884.

The latter part of January and the month of February have been rather more favorable to the physician than for some time, probably on account of the extremes of temperature to which we have been subjected. Still the mortality for January was lower than for the three preceding years, notwithstanding the increase of population. Clinics at the hospitals are very fair so far as numbers of cases operated on go but I have not been able to see myself anything either important or rare in the line of operative surgery. I have, however, a couple of rare cases which I wish to report, taken from the case books of Professor Andrews. They were operated on during the past year and I had the good fortune to see the first operation.

CASE I.—Thomas S., aged about sixty. Had noticed for some time an increase of size in the left tonsil, which caused some pain and interfered with respiration and deglutition. Had lost considerable strength and flesh. On examination a tumor about as large as a pigeon's egg was found on the left side. A diagnosis of malignant disease was made and the operation first suggested and performed by Cheever, of Boston, was decided on. This was done as follows: An incision three and one-half inches long from a point just within the angle of the jaw along the anterior margin of the sterno-mastoid muscle was first made. Another short incision was carried along the lower bor-

der of the jaw and a flap turned down. The dissection was then carried inward till the tonsil was reached, dividing some of the small muscles in this region of the neck. The mass was then enucleated by the finger. In this case there was but very little hæmorrhage and this was easily controlled. The patient made a good recovery and nine months after had gained much in strength and health with no signs of return of the growth.

CASE II.—*Ligature of Vertebral Artery*.—M. W., aged twenty-two. Five years ago had severe mental shock. Had epileptic fits ever since. Now has from twelve to fifteen daily. His mind has suffered perceptibly.

May 8: Dr. Andrews ligated the vertebral at the point where it turns backward after passing through the foramen in the transverse process of atlas. The operation was necessarily a tedious and difficult one on account of the depth of the artery and the narrow space for working.

Eleven days later he left the hospital.

August 14: A report says the fits have gradually decreased in number until now he has had but one in three weeks. Mental condition is much improved. A further report, dated November 15, says that the seizures have evidently ceased.

WILLIAM L. AXFORD.

68 THIRTY-FIFTH STREET.

EMINENT MEDICAL MEN WHO HAVE DIED WITHIN THE PAST YEAR.

GRAND RAPIDS, MICHIGAN, February 29, 1884.

The medical profession within the last year has lost some of its grandest and most eminent members. In Germany particularly has the mortality of those who have become distinguished in the profession been great. Among the deceased were workers in the various departments and specialties. Anatomy, pathology, physiology, pharmacy and botany have each lost some eminent one.

Among the noted surgeons has the mortality been particularly great. First, we may mention the death of Baum, senior surgeon to the University of Göttingen. Next, Von Bruns, the entertaining lecturer and skillful operator of the University of Tübingen. His operations on the trachea had given him a reputation throughout all Europe. In the beginning of the year in Germany, Professor Albrecht died, and a short time before him Wilms. By the death of Wilms the dental clinic of Berlin lost a clear lecturer and one of its best operators, and the profession one of its best friends. As Tübingen mourned the death of Bruns, so Giessen mourned Wernher.

The celebrated military surgeon Professor Sedillot died at Paris in the early part of the year. He received the prize from the academy of Paris for his investigation in regard to the per-

ioseum furnishing nourishment to the bones. The name of Suer, of Paris, may also be mentioned, not as an operator but as an inventor of instruments for ophthalmology. Also the well-known surgeon, Dr. Kraushold, of Frankfort, died last year.

Among anatomists the well-known Carl Bogislaus Reichert, distinguished also as an embryologist and histologist; and the senior of the Paris faculty, Jules Cloquet.

Among the deceased zoologists are Sücke, and the Swedish professor, Sven Nillson; and among botanists, Professor Oswald Heer. The noted gynæcologists dying were Scholler, of Germany, the eminent Dr. J. Marion Sims of the United States, and Dr. Funke, of Vienna. Pathologists, Germany lost Professor V. Hensinger; France, Bertillon; and England, William Farr.

Of the specialists dying we may mention Professor V. Reinacker, of Würzburg University and Professor V. Sigmund, of Vienna, each noted in the province of venereal diseases. The well-known laryngologist, Dr. Krishuler, of Paris.

To this list might be added the names of a host of others on whom the relentless hand of death has been laid. Many of these men devoted themselves to the science of medicine and pursued it under circumstances of especial danger to their lives. Indeed, some of them received their death from the exposure to which their investigations subjected them.

W. F. HAKE, M. D.

ORIGINAL TRANSLATIONS.

Translations from French Journals for THE PHYSICIAN AND SURGEON.

BY F. B. FLORENTINE, M. D., SAGINAW CITY, MICHIGAN.

MEDICAL CLINIC: HOTEL DIEU—PROFESSOR G. SÉE.

A CASE OF PNEUMOTHORAX FERMI: CLOSED.

BY DR. ALBERT MATHIEN,

Chief of the Medical Clinic.

We have recently observed, at the clinic of the Hôtel Dieu, a case of pneumothorax in which the symptoms presented particulars that deserves to be mentioned. We are, moreover willing to accept the invitation of publishing it after our master, Professor G. Sée, has shown us that the history of this case is of a nature capable of demonstrating a typical case of pneumothorax. These data, generally unknown in France, promise to lead to a greater precision of diagnosis than that with which we frequently satisfy ourselves. It is not then a simple gratification of self-love however legitimate, that prompts us. The determination of the precise form of the disease is likewise a

guide to the form of intervention, whether surgical or therapeutic. This precise diagnosis, a matter which is not to be disdained can also furnish to the prognosis some indications of real value. This is the case in question:

Observation.—H. B. aged twenty-eight years, keeper of a store-house, entered the 6th of November, 1883, at the hall Saint Christophe, bed number seven (service of Professor G. Sée).

Eighteen months ago this patient had typhoid fever, and it was during his convalescence that he commenced to cough. The cough persisted since that time; he became emaciated, weak, and suffered from hectic fever. At the time of his entrance here, his fever was intense and auscultation left no doubt as to the nature of his disease. In effect, we found to the right, posteriorly, a dull or flat sound in the upper fossa of the scapula, also, some dullness in the lower fossa, expiration prolonged and rude, bronchophony, and while coughing, a certain number of sub-crepitant rales. To the right, we found large sub-crepitant rales in the upper two-thirds of the lungs; these rales were augmented by the cough, during the intense respirations that followed. About fifteen days later, we found, in front, at the base of the thorax, to the left, a focus of sub-crepitant rales. In the following days the patient complained of severe pains, at this place, which were augmented by palpitation. By auscultation we found dullness and frictions. Later, these frictions and dullness extended towards the axillary region. Fever always intense; expectoration abundant, and the patient very anxious and agitated, was tormented with violent cough. The 27th of December following, an unusually severe spell of coughing, the patient was taken with excruciating pains at the base of the left lung, in front, with tearing sensations. Immediately being called we found him dyspnoëic, with a sudden jerking respiration, trying to immobilize the right portion of the thorax with his hands. The idea of a production of pneumothorax came to us at once. Nothing was changed in the phenomenon of percussion and auscultation. Posteriorly: in the upper and lower fossal of the scapulæ, sub-crepitant and genuine gurgling rales were found, especially to the left. At the base, dullness with obscurity of the respiration and some friction. Anteriorly: sub-crepitant rales, increased in volume under the clavicle. At the base, instead of the habitual dullness normal sonorous rales were found at this point, the respiratory murmur was very obscure, remote and as being stifled. There was, besides, neither amphoric resonance, nor *bruit de succussion hippocratique*, nor metallic tinkling. Notwithstanding all this, we did not hesitate to diagnose the case as one of limited pneumothorax.

December 28: Same state, same phenomenon of auscultation, but we provoked easily enough the *bruit de succussion hippocratique*.

December 29: There evidently existed marked dilatation at the base of the thorax on the left side, in front. The intercostal spaces were certainly enlarged, could feel an elastic sensation of resistance, a peculiar tension. The respiration, at this point, is always very feeble.

December 30: The respiratory anguish kept increasing; on the left and front, the thorax presented a dilatation more and more marked. By percussion, we found the sonority diminished, and in all the hypochondriac region up to the infraclavicular region, also found the sonority inferior to the normal, almost to a dullness. No amphoric sound. Posteriorly, at the base of the lung, we noticed dullness. About the middle third, we found sub-crepitant rales; at the summit, genuine gurgling sound. There existed a marked displacement of the heart; the apex of the heart being crowded under the sternum.

January 2: The dilatation at the base of the thorax is still more marked; said dilatation now occupying the whole hypochondriac region, at its anterior portion and about the arm-pit. In the most declivous region, we found dullness to the extent of about four fingers' breadth. Above, beyond the nipple, percussion gave rise to a sonority about normal, but nothing tympanitic nor amphoric. The displacement of the heart is still more appreciable; the apex clearly beating on the outside of the right border of the sternum. By palpitation we noticed well marked vibrations, a sort of superficial friction. Since the pneumothorax has been produced, pains have remained very intense in all the anterior portion of the thorax, on the left side. It produced very painful exacerbations, especially when coughing. The patient is in great anxiety, so much that hypodermic injections of morphine hardly calmed him at all. We determined easily enough tympanitic resonance. When the percussion was made by placing a piece of coin in front and placing the ear on the posterior part of the thorax, we could perceive a remote tympanitic resonance, almost imperceptible, however.

January 3: We endeavored to remedy the dyspnoea and displacement of the heart by a puncture. We employed the finest needle of Potain's apparatus; it is furnished with gold-beater's skin at its extremity in such a manner that the penetration of air was almost impossible. The puncture was made to a place, about two inches above and one inch outside of the nipple, to a point where we found, by percussion, sonority about normal. Acitric serosity at first appeared, rapidly followed by gushes of air. We then adapted the needle to the bottle of the apparatus, the vacuum having previously been made. It was easy to render ourselves an account of the issue of a notable quantity of gas; in effect, we noticed æriform gushes traversed with great swiftness the small glass tube interposed in the passage of the caoutchouc tube. The vacuum in

the bottle was made two or three times. During the operation we noticed nothing particular about the patient. It seemed not, yet, that the apex of the heart had any tendency to regain its normal position. Immediately after the puncture, we noticed by percussion, on a level with the pneumothorax, a notable augmentation of the sonority, a genuine *bruit amphorique*. In the afternoon, following the puncture the state of the patient is rather aggravated than ameliorated. He experienced, in all the pneumothoracic region, very acute pains, and his dyspnœa attained still larger proportions.

January 4: The dyspnœa is not quite so intense, but the depression is quite great, and he kept getting worse till the next day when death took place during the collapse.

Autopsy.—Upon examination, we found that the sonority was quite exaggerated in all the left hypochondriac, and we obtained by percussion a clearly amphoric resonance. The absence of the *trocard à rabinet* prevents us to state, by means of the *manomètre*, the exact pressure in the pneumothoracic bag. Nevertheless as the air escaped, through the canula introduced, by real force, it is evident that this pressure is superior to that of the atmosphere. The thorax being opened, we fell upon a vast sack half filled with gas and liquids. There was about a litre of citrinic liquids, and the gas occupied a volume certainly considerably more. Vertically, the pneumothorax occupied the pleural cavity about nearly all its height; laterally, extended to the sternum, even beyond its right border, in manner to disturb the pericardium, and crowding the heart to the right and backwards. From front backwards, to the contrary, the pneumothorax occupies a portion of the thorax. In effect, the lungs flattened, applied to the costo vertebral groove, occupied, as yet, all the height of the chest. It constituted of the thickened pleura, invested by a dirty yellowish coating of amorphous fibrin over the entire surface. It was impossible to find the place where the perforation took place. At the inferior portion, upon the diaphragm, there existed a thick coating of false fibrinous membranes that seemed to be torn and slashed. Similar deposits, but less abundant, were found on the surface of the pleura that lined the anterior portion of the lungs, transformed in flattened laminæ. The left lungs, crowded in the costo-vertebral groove, is resistible, of a grayish aspect, and atelectasized. At the surface, of cuts made into its thickness, we noticed numerous gaping bronchi. Upon its upper two-thirds we found scattered tubercles, and two or three small cavities, about the size of a walnut. One of these cavities is situated precisely at the union of the upper third with the lower two-thirds of the lungs; it is adhered to the pleura, but very irregularly; recovered with fibrinous deposits at this place. Could it not be here where the perforation took place? The heart was greatly displaced. The apex being crowded clear

to the right side of the sternum; it seemed to be completely immobilized in its situation. There was dry, fibrinous, pericarditis, more developed in front and inside, in the region corresponding with the left pleura. The right lung, presented at its summit a few small cavities, and in its upper two-thirds, abundant tuberculous infiltrations. About the base, the lung was very much congested, almost to pulmonary apoplexy.—*Le Progrès Médical*.

ANÆSTHETIC UPON MAN WITH CHLOROFORM ASSOCIATED WITH MORPHINE AND ATROPINE.

Dr. Aubert, of Lyons, addressed a note on the practical results of mixed anæsthetic with chloroform, preceded with a previous absorption of morphine and atropine. The advantages of this method are as follows, namely: (1) the initial excitation is nearly always insignificant; (2) anæsthesia is rapidly obtained; (3) a great calm of the patient takes place; (4) the extreme rarity of vomiting of the patient during or subsequent to the profound anæsthesia; (5) the calm and facility of wakefulness. These results upon man harmonize with those obtained by Drs. Dastre and Morat upon animals.—*Courier Médical*.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

PHAGEDENIC ULCER OF THE GROIN: CAUTERIZATION: CURE.

BY JAMES A. KING.

E. A., butcher, aged twenty-three, was admitted into the University Hospital, under the care of Dr. Donald Maclean, on November 12, 1883.

History.—About two years before his admission to the hospital he contracted a venereal disease of which he gave the following imperfect history. Two days after exposure he noticed two or three small sores in the left iliac region. In two weeks these sores were followed by a bubo. He then consulted a physician who made an examination, and found another ulcer on the prepuce. To this solitary ulcer the physician applied a caustic. The patient does not remember the character of the chancre on the penis. Three days after his consulting with the physician the bubo was lanced and a quantity of pus evacuated which continued to discharge for some days. In time suppurating bubo ceased to discharge and was nearly healed up when it again "broke out," and spread rapidly over the ante-

rior surface of thigh, the whole lower left wall of the abdomen.

Present Condition.—When admitted to the hospital the patient was much reduced and exhausted, his general health greatly impaired. He presented a sallow anæmic appearance, his appetite was poor, his spirits low and was feeling apprehensive and despondent. The ulcer extended from the pubes and left portion of the epigastrium, outward to the superior spinous process of the ileum, and downward over the anterior surface of the thigh, outward over the great trochanter. Great pouches are formed under the skin and fascia, in some places these structures are undermined for a distance of two and one-half inches. The exposed muscles of the abdomen and thigh are insensitive to caustics. The entire surface and pockets are bathed and filled with a disgusting fetid discharge. From the internal margin of the ulcer, extending inward and upward a large red cicatrix marks its former ravages, over the pubes are adventitious bands of integument, and nipple shaped pendulous masses, which show the devastating nature of the ulcer; outward on the thigh the existing deep pits and pouches illustrate its actively progressive destructive course.

November 17: The patient was first seen by Professor Maclean to-day; who on the following Monday, November 19, proposes to apply the actual cautery to the entire surface. He directs to have applied, in the mean time, a solution of sulphate of copper, and the red wash dressing used by moistening a piece of lint in the solution and then cut to accurately fit the ulcer.

November 19: The ulcer appears to be so much improved that Dr. Maclean thinks that the application of the cautery will not be necessary.

December 17: For two weeks the character of the ulcer continued to improve. The fetid condition of the discharge was corrected and the discharge itself greatly diminished. The surface assumed a more healthy condition, and became covered with good, strong healing granulations; the edges instead of being undermined and rolled in, began to contract excepting where the deep pouches were formed; a margin of new skin was forming, and the extent of the ulcer diminishing. His general health was greatly improved, and he became quite encouraged and hopeful. But the patient was then seized with malarial chills; he became weak, debilitated and generally out of health. The healing process of the ulcer stopped, and again the disease began to spread, undermine and destroy the surrounding sound tissues. To-day the patient was again brought before the class, and examined. It was now determined to cauterize the ulcer. The patient was accordingly put under an anæsthetic and the whole surface was thoroughly burned; the sinuses and pockets were slit up and their walls effectually seared.

February 6: After recovering from the shock produced by the cautery his health began to improve, and the ulcer took on a new action. Within a week there was a marked difference in every respect. The sore was now dressed after the method always employed. Lint cut to fit the sore, wet with carbolized water, this covered with oiled silk, and the whole done up with absorbent cotton and a roller or rubber bandage. When the granulations were excessive and weak the lint was moistened in the red-wash solution instead of the carbolic water. The ulcer now healed with the exception of two small spots. The patient being impatient to get away was dismissed.

Remarks.—It is not difficult to determine the variety of ulcer to which this one belongs. Its rapid growth; its persistent destructive tendency; the red indurated edge; its undermining, burrowing disposition, all stamp as being a phagedenic ulcer. You recollect that I have called your attention to the different classification of ulcers, and that we adopt the classification that divides them into two classes: (1) Those that have a tendency to heal, or the *simple* healing ulcer; (2) Those that do not have a tendency to heal. This second class is divided into three varieties. (a) *Those that do not heal from defect of action*—This variety includes the *weak* ulcer, which is characterized by its pale look, the discharge is thin and watery, the granulations rise above the surrounding margin of sound tissue, and spread over the edge, producing what is commonly known as “proud flesh.” In treating this kind of an ulcer, the first thing is to get rid of this mass of granulations. Caustics will do this very rapidly, but it is seldom necessary to resort to their application. Pressure with the astringent, stimulating lotions as zinc, silver or copper solutions, is all that need be done in most cases. The *indolent* ulcer is another form of this variety. Instead of excessive there is a lack of granulation. The surface of the ulcer is below the level of the healthy tissue. The circulation to the part is defective, and there is not enough of action to stimulate the formation of new tissue. The margin is hard and indurated, and the skin is dry and leathery. The edge is raised and irregular. The discharge is scanty, pale and thin, giving the surface of the ulcer a dirty grey shining appearance. The first thing in the treatment is to soften up the surrounding hard tissue. The application of a cantharides plaster and after a blister has formed, poultices are good. After the removal of the poultice use a stimulating wash, and bandage the limb firmly with a soft rubber bandage. The blister and poultice will stimulate the circulation, and the pressure of the rubber bandage will help to soften the surrounding hard structure, and causes its absorption. (b) *Those which do not heal from excess of action.*—The surface of this variety is uneven and covered with a grey or greenish-grey covering. The edge is swollen and hard, and is irregular and

everted. The surrounding parts, red or dark colored, and swollen. When the edges are particularly swollen, red and hot; the discharge thin, bloody and offensive; and a throbbing pain in the parts, the sore is known as an *inflamed* ulcer. If these conditions are somewhat modified, and the sore especially painful, it is known as an *irritable* ulcer. The latter variety occurs in nervous anæmic women, with impaired digestion.

In both the inflamed and the irritable kind, there is an active production of inflammatory new formation, but there is an obstructed circulation through the parts, and the new products do not go on to full development, but break down into pus. In these forms that do not heal from excess of action, there is always more or less pain, and in some instances it is very severe. When this is the case the first indication is to relieve the pain, which can be done by a hypodermic injection of morphia, or the local application of some anodyne. As already mentioned there is usually impaired digestion, with constipation. These constitutional defects must be corrected. The part is to be kept at rest. If the sore is on an extremity, it can be elevated. The ulcer should be kept covered with simple water dressing, which should be frequently renewed. With this line of treatment the pain soon leaves, and the sore takes on a healthy action and heals rapidly. (c) *Those which do not heal from peculiarity of action.* This variety is usually the result of predisposing causes. The quality and quantity of the blood has much to do toward giving rise to these ulcers. When the blood is deficient in quantity, as is the case in the tissue which surrounds, and the integument which covers varicose veins, the part is quite prone to ulcerate. The tendency to ulceration is also produced by an undue quantity of blood in the part. When the latter condition exists, the destruction of tissue is generally very rapid, and the quantity thus suddenly destroyed may be very extensive as in the case before you. I have thus hinted to you the two most common forms of ulcer, which do not heal on account of peculiarity of action; the *varicose* and the *phagedenic*. The pathology of these ulcers differs somewhat from that of the other varieties. Here the tissue is destroyed so rapidly that true sloughs are formed. Ulcers are generally produced and maintained by a process of death, which is called molecular necrosis, but in the phagedenic the ulceration is so rapid that considerable tissue is destroyed in mass. The copious discharge which is thrown off the surface of an ulcer of the nature of phagedænia is for the most part derived from the blood. The irritation which produces an ulcer, causes an increased blood pressure, which throws the capillaries of the neighboring tissues into a state of tension. The walls of the capillaries then relax and allow a transudation of first the fluid portion of the blood—the serum, and afterwards the white blood corpuscles and fibrin. This infiltration of the surround-

ing tissue causes swelling, and the pressure on the blood-vessels seriously interferes with the nutrition of the effected part. The impoverished cells imbibe the fluid in which they are bathed, swell up, degenerate and finally break down and liquefy. Thus, you see while much of the fluid is derived from the blood, the discharge is increased in quantity by the decomposition of the diseased tissue, and the discharge will always contain the elements of ulcerating tissue. The transudations are the means by which the destroyed tissue is repaired, but if more is thrown out than is utilized the surplus is thrown off as pus. The copious ichorous discharge of these inflammatory ulcers is very irritating and increases the inflammation of the surrounding tissue. As a result of the inflammation, the tissue-cells are reduced to an embryonic condition; new cells of a very unstable nature are produced in great numbers, which soon degenerate and break down, thus the ulcer spreads by the liquefaction of the edges. It is very evident that in order to check the destructive course of these ulcers, the inflammatory action must be subdued. To accomplish this the skill and ability of the surgeon is often severely taxed. This patient before coming here had passed through the hands of several physicians. A letter from one of them shows that he was baffled and disappointed. The ulcer kept on its destructive march in spite of all his efforts to check its course. When the patient came here you will remember that he was greatly reduced and exhausted and completely discouraged. His general health was rapidly yielding to the great drain made upon his system by the abundance of the discharge which flowed constantly from the surface of the ulcer. His impaired constitution which was continually growing worse, was all the time diminishing his recuperative power, the destructive force of the disease was thus being increased.

The method of treatment employed since he entered the hospital, consisted in rest, tonics, alteratives, local stimulation and the cautery. Rest is a very important auxiliary in the treatment of any inflammation, and it is equally important in the treatment of ulcer. In this instant it was doubly indicated. The position of the ulcer is such that any motion of the trunk or lower extremity would disturb and irritate the diseased region. You see how strongly this factor of rest was demanded in the treatment of this case. In his exhausted condition tonics and good diet were clearly called for. Iodide of potassium was given from the first. From his account it was difficult to determine whether the patient had contracted syphilis or not. He did not have any of the secondary symptoms, there was no rash, sore throat, or falling out of the hair, however, I felt that the disease might have a syphilitic complication, and had him put on the iodide. Letters which have been received since he entered the hospital, from the physicians who first treated him,

show that he did have a primary syphilitic lesion. I thought, at first, that the ordinary means of treating these tumors, might succeed in this, and in addition to the general treatment, local applications were made of sulphate of copper, of the strength of twenty grains to the ounce of water. This for a time had a marked beneficial effect on the disease. Its progressive nature was changed, and for a time there was every indication that no other measure would be necessary. The quality and quantity of the discharge were greatly improved, and the entire surface covered with healthy granulations. But the solution, after a time, lost its effect, and the healing process took a backward turn. It was soon evident that more efficient means would have to be used. The patient was put under the influence of an anæsthetic and the surface brushed over with the actual cautery. Great care was taken that it was applied to all the sinuses and irregularities. This was followed with very severe effects; he experienced a profound shock, and for a few days was quite low and in a very exhausted condition. After he recovered from the shock of the burn, the ulcer began to heal, and has continued to do so, uninterruptedly, to the present time. You now see the great difference. The wound is now practically healed. There remains this great pink scar, which shows the vast amount of tissue that was destroyed. He is quite another man, both in appearance and in spirits. He can now return home as soon as he wishes.

INFLAMMATION OF BURSA PATELLÆ: FREE INCISION: CURE.

C. E. P., aged forty-nine. Admitted January 21, 1884.

History.—About the middle of November the patient injured his knee by pressing it against a board. It became red and swollen, and was very painful and sensitive. This condition continued for three or four days. A bandage was now firmly passed around the knee, which gave great relief and the inflammation and swelling soon subsided. In two weeks after the injury the knee gave him no trouble, and continued strong until two weeks before coming to the hospital, when the knee again became weak and painful.

Condition.—A large tumor on the anterior aspect of the knee-joint. It is boggy to the touch and distinct fluctuation can be felt. The joint is quite useless. The patient, on account of the pain and weakness does not use the limb in walking.

January 22: The patient was brought before the class and examined by Professor Donald Maclean.

Diagnosis.—Acute inflammation of the bursa patella. Without an anæsthetic a free incision was made into the cavity of the bursa. The contents, which consisted of serum, with some blood and pus was freely evacuated. The wound was packed full of absorbent cotton and the limb put up with surface dress-

ing. Contrary to the rule the patient was allowed to leave the hospital after the operation and go home.

February 11: Returns, and reports that knee has been quite painful. Flax-seed poultices were freely applied. There had been considerable inflammation and discharge after the operation. The wound is now rapidly granulating and shut. The application of the poultices was stopped. The limb to be dressed with simple water dressing and rubber bandage applied.

The parts were in such favorable condition that the patient was dismissed.

PECULIAR GROWTH ON ARM: REMOVAL.

Mrs. M. P., age forty-six. Admitted January 22, 1884.

History.—About five years ago patient felt a sharp pain on upper and back part of right arm. She thought at the time that something had stung her. These pains returned at irregular periods and would last for three or four days at a time. About one year afterward, a small red mark the size of a pin's head appeared which has slowly increased but more rapidly of late.

Present Condition.—A circumscribed red mark about the size of a dime, under which the tissues are thickened forming a nodule. The growth seems to be confined to the skin. It is movable upon the deeper structures. When the arm is unduly exercised, and during menstrual periods it enlarges and throbs.

January 23: Examined by Professor Donald Maclean at his regular clinic, and removed, together with a margin of healthy tissue. No anæsthetic.

Remarks.—This growth, small, pink, definitely circumscribed, growing on the arm of this woman, in itself is no serious affair. It is enlarging but very slowly, is not painful, and never has been to any degree. It does not in any way affect the health of the individual, nor does it interfere with the proper movements or usefulness of the arm. From these facts it does not seem to be a case requiring surgical measures. Probably it would be the best course not to meddle with it. But then one fact stands out clear and plain. Here is a growth of some kind. It has an irritable disposition. When the arm is exercised more than usual it enlarges and throbs. It has a sympathetic connection with the phenomena of menstruation. During these periods there is the same enlargement and pulsation, that is felt after the arm has been unduly used. While the growth seems now to be a simple and trifling affair, it may soon change its character, and in a remarkably short period become a very grave disease. A few weeks ago I was called upon by a young man, who wished advice concerning a growth on his arm in much the same situation as this, which had existed but a few months, and had already involved all the

middle portion of his arm, and had extended to the lymphatic glands of the axilla. No measure short of amputation at the shoulder joint would have been of any benefit, and the favorable result of this would have been very doubtful. This tumor had its origin in a mole which had existed on his arm since infancy. This case illustrates how very unreliable are these seemingly innocent spots and stains. This is a consideration that can not be ignored by the surgeon, who must be careful in giving prognostic opinion.

In this case there are two directly opposite courses to pursue; the one to leave it alone, the other to remove it by making free incisions in the surrounding sound integument. In view of the peculiar origin; the recent tendency to increase; and the sympathetic irritable character; with the desire of the patient to have it removed, I will adopt the latter expediency. You see me make with two sweeps of the knife an elliptical incision, taking care that they are wholly without the diseased tissue. This is a very slight operation compared to what might have been required if the tumor had been allowed to grow.

February 6: Patient brought before the class. A large red cicatrix marks the point of the operation. The incision did not unite but separated. The structures surrounding the incision suppurated and sloughed away leaving a large rough modulated ulcer. During the time of suppuration, and for several days following the pain was severe. The tissues of the parts are now soft and in good condition. There is none of the original tenderness. The lymphatics of the axilla are free from any evidence of being affected, and all indications show that the disease is thoroughly removed. The simple water dressing was used excepting at a few dressings when the red wash was employed, but it was so painful that it had to be discontinued. While the sulphate of zinc and tincture of lavender make a very grateful and beneficial dressing for most ulcers, it is unsuited for those of an irritable nature, a fact very perfectly demonstrated in this case.

VARICOSE ULCER.

J. V., aged forty-two. Admitted to hospital January 10, 1884.

History.—Three years ago patient noticed that the veins of left leg were enlarged. This condition continued without much change, save a slow enlargement, until six months ago, when he received an injury just above the ankle. An ulcer soon formed at the side of injury, which has remained unhealed. Last July a physician was consulted, who performed some operation which the patient described or called "burning with a stone." An incision was also made through the tissues and the bone "scraped." The parts soon healed after these opera-

tions, but the ulcer remained open. About ten days before coming to the hospital erysipelas attacked the surface surrounding the joint, but yielded to treatment.

Present Condition.—A varicose ulcer above ankle joint. The ordinary treatment for ulcer was ordered. The red-wash applied every few days. The ulcer was covered with a piece of patent lint cut the size and shape of the sore, moistened in carbolic water. This in turn covered with a piece of oiled silk and the limb done up with a rubber bandage.

January 22: Dismissed, cured.

TORTICOLLIS: DIVISION OF THE MUSCLE: IMPROVEMENT.

Miss L. M., age twenty. Admitted to hospital October 13.

History.—When the patient was about two years old, she contracted a severe cold, which was followed by inflammation of the external auditory canal. The intense pain in the ear lasted for several weeks. During this time the patient laid upon her right side when asleep. After this the head was noticed to be turned to one side.

Present Condition.—The patient is strong and healthy, is large and well developed. The head is drawn down toward the right side, as well as twisted and rotated toward the left. There is a slight degree of lateral curvature of the spine, and the right side of the face is smaller than the left.

The patient was operated upon without the administration of an anæsthetic. But from the struggling and bad behavior of the patient the tendon was not completely divided.

October 22: The patient was again operated upon, and the tendon divided. After the division of the muscle the parts were so relaxed that the patient could not steadily support the head without special effort. The movements of the head were more free. Patient left the hospital much improved, but before the full effects of the operation could be determined.

Remarks.—When an attempt is made to turn the head, this dense band stands out quite prominently, and prevents free movements. The head is constantly twisted and carried to one side. This change from the natural attitude has left very marked effects. During the period of growth the nutritive processes of the two sides of the body were not equally carried on. This has resulted in marked structural modifications. In some cases of wry-neck these modifications produce much greater deformities than are seen in this case. Here there is some lateral curvature of the spine, caused from the want of muscular development of the affected side. The features are not symmetrical, the right side of the face being much smaller than the left. We may be able to correct the twisted condition of the head and neck, in this case, by dividing the muscle, but it is too late to expect any further results. The early division of

such tense bands prevents all deformities that would otherwise, subsequently follow.

In the majority of cases of torticollis the sternal portion of muscle is the part contracted, but in this case the clavicular portion is affected.

There are several reasons, why the patient should not be anæsthetized, when these dense bands are cut. When fully under the influence of an anæsthetic all the muscles of the body are relaxed, making it much more difficult to sever the structure. In this relaxed condition it is not always possible to tell when the required amount of cutting has been accomplished, which increases the liability of wounding important surrounding structures.

EDITORIAL PERISCOPE.

TROUBLE IN A MEDICAL COLLEGE.

For some time past there has been great dissatisfaction in the management of the Saint Louis College of Physicians and Surgeons. This feeling became so great that some time ago the majority of the faculty sent in their resignations. At the same time the students of the college pledged themselves to support retiring members of the faculty, and to leave the college if the faculty left. The resignations of the faculty not being acted upon by the board of trustees, they continued to deliver their lectures and the students continued in their attendance. It was supposed that this would be continued until the end of the term. But new offences were given the faculty, which resulted in the withdrawal of eight of the professors. New appointments have been made by the board of trustees, filling all vacancies but two; the chairs of materia medica and ophthalmology remaining unfilled. The students who had pledged themselves to leave with the portion of the faculty that resigned, have recanted, and concluded to remain.

THE DEGREE OF TEMPERATURE NECESSARY TO DESTROY INFECTIOUS GERMS.

The questions which are raised and answered in the following contribution of H. Walter Verdon, M. D., Medical Officer of Health, in the *Lancet*, are of ultimate importance to all practicing physicians, and of great practical interest to health officers, who have to do with controlling the spread of infectious diseases:

What is the minimum heat required to render the germs of disease inert? In the stoving of infected materials to what

heat should the oven be raised? and for how long should the temperature be sustained? In nearly every parish throughout the country disinfection is carried out by means of dry heat. It is a convenient mode, inexpensive and generally thought to be effective. Dr. Parkes writes (Practical Hygiene, page 482): "The temperature ought not to be less than 220° Fahrenheit and probably a temperature of 250° Fahrenheit is desirable." Dr. Ransom, of Nottingham, used a temperature of 225° Fahrenheit to 255° Fahrenheit. Dr. Henry, of Manchester, employed a temperature of 212° Fahrenheit, sustained for one hour. Mr. Wynter Blythe, in his "Dictionary of Hygiene," referring to some experiments in Hungary, states: "A temperature of 278° Fahrenheit considerably retards decomposition, but certain forms of bacterice cannot be destroyed by it." Dr. Esse, of Berlin, uses a steam chamber with a pressure of two atmospheres and a temperature of 234° Fahrenheit and Mr. Lyon, of this country, has invented a machine which will attain a temperature of 324°, with a pressure of forty pounds to the square inch. It is probable that a moist is more potent than a dry heat, but it must be employed considerably above boiling point. Professor Tyndall, in experiments upon floating matter in the air, found that some fluids were not sterilised by continued boiling. It is probable, however, that an apparatus which gives a moist heat of 250° Fahrenheit is effectual. The cost will seriously militate against the general use of high pressure disinfection. In large parishes a first cost of £300 might be met, but in small parishes the expense would be sufficient to exclude this process.

With a view of finding a safe mode of disinfection, I made some experiments with a Harveystove, a dry-heat-stove already in use in the parish. Linen, calico, flock and cotton articles became scorched and brittle at 255° Fahrenheit and ignited at 380°; hemp and horse hair singed at 260° Fahrenheit and ignited at 400°. At the time the ticks singed, the temperature in the centre of a feather pillow was only 130° Fahrenheit, that in a flock pillow 215°. In order to get a moist heat, six buckets of water were placed in the oven, and the heat raised to 300° Fahrenheit; a feather and a flock pillow were then placed in the oven and the heat gently raised until a thermometer lying on one of the pillows registered 340° Fahrenheit. The thermometer in the centre of the flock pillow stood at 290°, that in the feather pillow registered much less; but with this great heat there was no scorching or discoloration. These experiments point to the unreliability of the dry-heat process; for at a temperature which one would consider insufficient for disinfecting, the material is singed and rendered useless. At the same time they suggest a remedy which is easy of application and inexpensive. The employment of a steam jet or a few buckets of water in the stove, places a thoroughly

effective process in the hands of those who already have the dry-heat arrangement at command. In conclusion I would say that the systematic use of the thermometer should be considered an essential part in the process of disinfection, upon which the health of the community so much depends, and that this important duty should not be entrusted without definite regulations, to unskilful hands.

CONDENSATIONS.

THE editor, Richard V. Mattison, announces in his February issue that the *Quinologist* will, thereafter, be discontinued. A growing necessity for constant personal attention to his extensive interests, and the contemplation of new enterprises in the near future, are assigned as the reasons.

THE anniversary address, at the seventy-eighth annual meeting of the Medical Society of the State of New York, was delivered by Alexander Hutchins, A. M., M. D., President of the society. His subject was "The Reciprocal Attitude of the Medical Profession and the Community." The address is a feast for anyone that reads it. It is able, eloquent, practical and scholarly, and we feel that no higher order of medical literature can grace the pages of this journal, than the following extracts, which are only representative sections:

The results of the world's labor, which have become the foundation of medical learning, are on open pages which all may read. Not with gigantic studies have the distances been traversed, not by herculean labors have the stones been placed, but slowly, patiently, insensibly, have the toiling students of living things observed, recorded and grouped, one generation after another, names multitudinous and lost to history, till the student who starts afresh to-day, stands debtor to a scholarly ancestry, as remote as the world's past, connected with a succession of humble ministers on nature, as remote as the world's end, whose absorbing inspiration is the genius of true scholarship the wide world over—the search for truth and its free gift to mankind. Medical science assumed her unique place among the sciences when the facts and phenomena, evoked by biological research, were made the basis of investigation, whose purpose is to prolong the vital process and farrest the untoward influences that perpetually threaten its extinction. This is her distinctive mission. The facts are not wanting to support the belief that, through the varying civilizations, the protection of communities has been the object of her forethought, and hygienic measures have shaped themselves into laws; yet it has been reserved to the present century to enunciate the problem of how communities are to be protected, and to formu-

late laws in accord with strictly scientific methods, looking to the prevention of disorder and the prolongation of human life; yet the individual has always been the object of her solicitude and the record shows how persistently, according to the lights of each era, the precepts of personal hygiene have been inculcated, and how, with each marked acquisition in scientific knowledge, scientific methods have been applied to the preservation of the individual.

Within the past year* the father of English vital statistics, Dr. William Farr, died at the ripe age of seventy-five years. In 1837, at the age of twenty-nine years, he published the first English registration report of vital statistics. By a singular coincidence the same month in which his death occurred, Mr. N. A. Humphreys read a paper before the Statistical Society on "The Recent Decline in the English Death Rate and its effect upon the Duration of Life," wherein he analyzes the Registrar General's mortality statistics covering forty-five years (1838 to 1882). The comparison of Dr. Farr's and Mr. Humphreys' new life tables shows that the mean duration of the life of males has increased from 39.91 years to 41.92; that of females from 41.85 years to 45.25 years, or of a generation from 40.86 years to 43.56, showing an increase of 2.70 years, equal to nearly seven per cent. Of course the importance of this showing is due to the fact that these results are traceable to the enforcement of State medicine and hygiene during this same period.

Although a large proportion of young people cease to be dependent before twenty, and a large proportion of the elderly persons do not become dependent at sixty, we shall not be far wrong in classing the forty years from twenty to sixty as the useful period of man's life. Table IX shows us that of the two thousand and nine years added to the lives of one thousand males by the reduction of the death-rate in 1876-1880, no less than one thousand four hundred and seven, or seventy per cent., are lived at the useful ages between twenty and sixty. Of the remainder of the increase, four hundred and forty-five, or twenty-one per cent., are lived under twenty years, and one hundred and fifty-seven, or nearly eighth per cent., above sixty years. Thus of the total increase seventy per cent. is added to the useful, and thirty per cent. to what may be called the dependent-age periods. The increased number of years lived by one thousand females, according to the rates of mortality that prevailed 1876-1880, is three thousand four hundred and five. Of these, two thousand one hundred and ninety-six, or sixty-five per cent., are lived at the useful ages between twenty and sixty; five hundred and seventeen, or fifteen per cent., under twenty years of age; and six hundred and ninety-two, or twenty per cent., over sixty years.

"Looked at from another point of view, there has been an

* April 14, 1883.

addition of three minutes for men and five minutes for women, in England to every hour of their existence, and under her present conditions a country with a population of thirty millions would, at the end of a generation have two millions more inhabitants than under England's previous conditions."

The one hundred years have just passed since Jenner's observations and experiments in Gloucestershire* associated his name inseparably with the amelioration of small-pox. Fifty years later Ehrenburg and Dujardin studied and described the various forms of monas, vibrio, spirillum and bacterium, the century hardly rounded before Schwann had shown that these bacteria are the cause of the putrefaction of organic substances, and Pasteur had extended this discovery so as to create the belief that all putrefactive changes are due to such minute organisms. When Lister had developed his antiseptic method based on these discoveries; when Koch propounded his theory that tubercular consumption was due to the bacillus; when erysipelas and glanders and splenic fever and malignant charbon were shown to be due to special types of bacteria, and Pasteur had inoculated the attenuated virus of malignant charbon as a protection to cattle and sheep from attacks of the severe forms of the disease, the immense importance of which discovery has been confirmed, this present year, by a report presented to the Veterinary Society of the department of Eure-et-Loire, showing that these vaccinations, practiced on a large scale, had reduced the annual loss on these flocks from nine per cent., to 65-100 of one per cent.† The ink is hardly dry from the presses that announce that Lacerda has discovered the yellow-fever microbe, Ziehl the micrococcus of pneumonia, Koch the special bacterium of cholera, Eschbaum the micrococcus of gonorrhœa, Klein of diphtheria, Pohn-Pincus of scarlet fever, Leyden of cerebro-spinal meningitis, Fehleisen of erysipelas, and Linard the bacillus of malarial fever, the intermittent activity of this latest "find" receiving a prompt quietus when immersed in a two per cent. solution of quinine—a baptism that would not involve regeneration to much more highly organized creatures. Whether all these and their similars are to stand the test of propagation by "pure culture," and wheel into the prophylactic column, who can say? But it would be a risk to cast their horoscope. Whether the time is ripe to hang a man on microscopic evidence, or whether the time will ever come when the special vibrio of the assassin shall be diagnosticated from the spore of the burglar and the zoon of the concupiscent, are not questions angrily struggling for a reply.

The attitude of the community toward scientific study is, primarily, that of antagonism. Innovation provokes opposi-

*1775

†*Medical and Surgical Reporter*, August 17, 1883.

tion. There are many years, but one sentiment, between the persecution of Galileo and the onslaught on vivisection. 1616 has somewhat of kinship with 1884. To the great mass, whose interests are mainly confined to the harsh treadmill of life,

"Storing yearly their little dues of wine and oil,"

scientists and scientific study are a matter of indifference, not infrequently mingled with contempt. Popular government has never initiated any movement to promote research, for that implies a cultivated sentiment among the voters, and the English speaking nations have done almost nothing in the way of State appropriations for scientific study. Germany, France, Russia, Holland, Belgium and Italy are, almost exclusively, the originators of the later methods. From their laboratories have come the great discoveries of modern times, and this, because, in these countries, the laboratories have been under State patronage. The most that has been done in England and the United States, has been done by those men whose capacity for scientific discovery has been accompanied by the possession of private fortune; the remainder has come from work incidental to the occupation of professorial chairs. The cultus of medical science must continue to share the experience of all original investigation, and remain a personal factor among the diverse directions of human industry. Multitudes stand ready to seize the results of its labors and apply them in ways that men can understand, to the satisfaction of human need. They who cull the flowers, enjoy the fruit, reap the harvest to sell the crop are of different mind and other station than they who till the ground, plant the seed, nurture the sapling and wait, through recurring seasons of sun, and snow till the sturdy limbs are shelter and refreshment to the unthinking life that reckes not of its benefactors. There is a medical science, but if medicine were a science only, there would be fewer medical schools than now exist. Charlatany is rampart, and the name of doctor covers lies and practices, which are a ruin and a curse to the people. Those who are true are forever on their defense against their titular parasites and the stand for honorable manhood is weakened by the assaults of its irresponsible foes. When the pre-eminent importance of accurate diagnosis is considered; when the difficulties that environ its acquisition are appreciated; when it is understood how patient and enduring are the observations that lead up to the mastery of the nomenclature of medicine and the comprehension of the varied conditions it represents, it is humiliating to hear the most profound disorders that afflict mankind bandied about in common speech as the veriest play-things of the hour. The diphtherias that come into homes as plentifully as summer showers over the landscape, and pass away as soon; the peritonitis that disturbs the quiet of the night, and is dissipated with the morning dew;

the pneumonia and spinal meningitis, that early recognition and prompt specific lead in a few days to vigorous health, are all recounted with flippant unconcern, in drawing-room and social circle, on the highway, in the mart. These are not the manufacture of the people, for the terms are foreign to domestic culture. It were refined cruelty to charge upon the doctor such consummate ignorance; better for to credit him with the knavery that can command untruth to advance his interests of fortune, and on the other hand, it is asking too much of credulity to believe that the attitude of the profession is friendly to the community, when the lavish gift of doctorate puts into so many undisciplined hands the medical arts, which are as potent for evil as for good. Is the community safer with broadcast hypodermic morphia, aconitia and strychnia (vegetable medicines for sooth) than with a blind surgeon exsecting a tumor from the axilla? Whence comes this malaria, that has jaundiced the speech of men, but from the track of the scapegoat, making for the wilderness, burdened with the easy diagnosis of lazy incompetence? Has the clinical thermometer proved an unmixed good, when every pyrexia is the impetus to indiscriminate quinine; and who is responsible for the "one cent a grain in pill or powder" that blazon in the sun-light, through colored globes in shop windows, along every thoroughfare? Has the speculum contributed to the moral sense of the community, as prurient or needless interference, with most cruel vandalism, is invading the sanctity of the home and making the daughters of the land wise before the time?

Let the community, through its law-makers, legislate into control an acceptable judicial body, in which shall rest the decision of the fitness of candidates to assume the responsibilities, enjoy the honors and reap the emoluments of professional life, and the sharp contests of dogmatic rivalry, the destructive wiles of medical harpies, and the weakening competition of medical schools would be rapidly equalized in the "survival of the fittest." Fitness is, in some sense, a test of honesty, and this safeguard the community has a right to demand. No man has an inalienable right to practice medicine. He can choose to do so, but the public may adjust the tests of his fitness The inhabitants of civilized countries having desired legal or medical assistance, and well knowing that they were unable to form any immediate judgment on the quality of that assistance, have looked for and obtained external means of protecting themselves from bad law and bad medicine—means external to themselves. Such communities have required that lawyers, doctors and others should give some evidence of qualification to official examiners There is a laudable pride in occupations, and its basis is the consciousness of doing a useful thing well. To defend his heritage is the chivalrous duty of the scholar.

MEDICAL DIGEST.

THE VALUE OF ANTIPYRETIC TREATMENT.

The value of so-called antipyretic treatment has seldom been doubted and at the present day is universally admitted. Opinions may and do differ, as to the most suitable methods to be employed for this end; and it is still open to inquiry how the agent employed exerts its power. Indeed, the whole subject of fever—which has received so much attention from the physiologist and the physician—is by no means fully exhausted. An important and careful contribution to the subject appears in the current number of *Virchow's Archiv*, by Dr. Sassetzky of Saint Petersburg. It consists in a study of the assimilative functions and of the intimate tissue-changes occurring in the febrile process, especially as shown by the elimination of nitrogen. The research was undertaken with the view of testing the effects of treatment directed to control the fever. The paper opens with a brief review of the history and progress of what is known as the cold bath treatment, and antipyretic method which the writer says is now adopted in all the principal clinics in Germany; and he has attempted to determine the relative value of this and other antipyretic agents—as quinine and salicylate of soda.

The result of this laborious research may be sufficiently indicated by the conclusions given by the author. He found that invariably the cold bath diminished the elimination of nitrogen, and that a similar but far less marked diminution occurred in the cases treated by quinine and by salicylate. The quantity of urine was increased by each method, but to the largest extent by the bath. The assimilation of the solids and nitrogenous constituents of milk was improved under the bath treatment, as shown by the very marked diminution in the fecal elimination of nitrogen; and the same fact was also noticed, to a less degree, by the other methods. The quantity of water ingested was also diminished, and the loss of water by the lungs and skin was also diminished except under the salicylate, when the cutaneous loss was increased. These are the results which show that, during the febrile state, the patient is in a far better condition under the antipyretic treatment than without it. So far as assimilation of solids in the blood goes, the author declares that it is so improved by this treatment as to approximate the lower degrees observed in health. The main reason for this difference in the febrile organism with and without exposure to controlling influences, is no doubt in the actual reduction of the temperature of the blood—pyrexia implying increased tissue-metabolism, tissue-degeneration, increased oxidation and so on. All the phenomena of

fever are linked together in an inscrutable way, some of them as causes, others as consequences, of the essential fact—the heightened temperature. Seek what explanation we may, it cannot be denied that the reduction of the excessive body heat is of good effect; and, as Sassetzky's research clearly points out, this result is shown in diminished metabolism in lessened elimination of nitrogen and carbonic acid, and, as the demand for oxygen is lessened, the respiratory action falls, the action of the heart is improved, and the liability to circulatory disturbance in consequence of cardiac failure is mitigated, whilst the abeyance of the effects of the febrile process on the secreting organs permit of a more natural performance of their functions and a more ready assimilation of nutriment.

TARTAR EMETIC.

Dr. Harvey L. Byrd, in the Philadelphia *Medical Times* writes: I am thoroughly satisfied, after four decades of experience as a physician engaged in active professional work, that, next to blood-letting, the tartrate of antimony and potash is absolutely without a peer or rival as an antiphlogistic agent in our therapeutic resources, and that it may in some case be substituted for blood-letting even without detriment when certain circumstances or conditions do not absolutely demand the use of that old and peerless remedy in inflammation. I am conscious of the import of the language I am using, and desire that I may not be misunderstood in regard to it. And I wish to add still further, that, like blood-letting, the necessity for its use in practice, is now as great as it ever was at any time in the history of the article. After venesection, in acute inflammatory affections, I have found it produce its most strikingly marked beneficial effects, and feel fully warranted in saying, that the most sceptical member of the profession would not doubt, its wondrous power for good, could its action be observed in a single case. But as already stated above, its field of usefulness covers absolutely all cases of febrile and inflammatory affections that are unattended with inflammation or considerable irritation of the gastric mucous membrane. Those conditions only contraindicate its internal employment in any form of disease whatsoever, as in any pathological condition attended with a full or even moderately tense and quick pulse, with dry skin and paucity of the secretions generally. It will be seen from these statements that with the single exception of calomel it is capable of doing good in a larger number of diseases than any other remedy in the hands of the medical practitioner. With these remarks I might conclude this paper, and, were I not aware of the fact that there are a large number of practitioners who have never used the article at all, would probably be inclined to do so. But for the use of such, and of those

who have permitted other and more recent articles to monopolize its place in their therapeutic resources, I feel that the interests of science demand that a few more words should be added regarding its mode of administration, etc.

In doses of from one-eightieth to one-tenth of a grain; alone or in conjunction with opium or one of its salts or preparations I expect good results from it when given as an antiphlogistic or antipyretic, expectorant, diaphoretic, diuretic or as an alterative. I never perscribe it as an emetic unless no other article of that class is convenient, and am not prepared to speak of its tolerance as mentioned by Rasori many years ago, in acute diseases, from personal experience. Thus, I find it a valuable agent in most forms of fever, in bronchitis, in pneumonia, in croup and laryngitis, in torpid conditions of the liver, in certain chronic cutaneous diseases, and in sick-headache, etc. It is as valuable in lessening the force and frequency of the circulation as veratrum or aconite, and, being tasteless in the proper dose is almost absolutely free from disagreeable or unpleasant effects and thus is generally preferable to either of them.—*New England Medical Monthly.*

MORPHIA HABIT. /

At a December meeting of the Medical Society of London, a paper was read by Dr. Benjamin Ward Richardson on morphia habitués and their treatment, of which the *Lancet* makes the following abstract:

The author first described the usual circumstances which led to habitual hypodermic injection of morphia, to which his communication more especially referred. He spoke of the quantity of morphia which could be tolerated for long intervals of time and described the dose as varying from less than a grain to as much as fifteen grains per diem. Later on an account of the symptoms by daily injection of three grains and a half extending over a period of two years, was given from facts supplied to Dr. Richardson by the habitué himself. The symptoms were, (1) torpidity of the action of the liver; (2) abscess formed at or near the site of puncture; (3) tendency to local induration and (4) a free excretion from bronchial surface; (5) difficulty, occasionally, in swallowing morsels of small substances, as if the object were arrested in tenacious mucus; (6) a tendency at times to violent perspirations, more often present when morphia has been almost entirely excreted, or when the system has been much debilitated; (7) various perversions of sensations; (8) occasional difficulty in articulation like that resulting from alcoholic excess; (9) impotency; (10) difficulty of breaking off the habit owing to craving for the narcotic, and symptoms of debility, when it was left off; (11) mental exaltation and depression, with tendency to exaggerate dangers; (12)

excessive excitability of the imagination when reading—as for example, works of fiction; (13) lessened sensitiveness and receptivity with inclination to apathy, varied, it may be, with brief periods of mental exaltation. The more serious subjective and objective symptoms induced by deeper indulgence in this habit were next described. Increased appetite for the morphia; loss of will power; confirmed apathy apart from the ordinary toxic effects of opium; failure of all the mental faculties together with general failure of voluntary and involuntary muscular power were witnessed. Diminished vitality with bending of the body and the signs of premature old age were the physical symptoms. The dangers incident to the practice was the next topic dilated upon. In certain forms of fatal diseases, the habit with all its drawbacks was thought to be sometimes permissible and useful. Existence might be made easier and life prolonged. This, however, was the exceptional part of the practice, and required to be carefully separated from the general. In conclusion, Dr. Richardson insisted upon the importance of the thorough breaking off of the habit as the only natural and safe method of cure (*vide infra*).

THE DIRECT TREATMENT OF SPINAL CARIES BY OPERATION.

In the Royal Medical and Chirurgical Society, of London, a paper by Mr. Frederick Treves on the above subject was read and discussed. Mr. Treves contended that the gravity of spinal caries depended not so much upon a special pathological feature in the process as upon the depth at which the disease is situated, and its inaccessibility to the usual operative procedures applied to caries elsewhere. Diseased bone cannot be removed from the vertebral bodies, and the morbid products having to travel a great distance in order to be evacuated, are apt to induce immense purulent collections. These collections are usually opened at a point remote from the original seat of the disease. In the operation proposed by the author on the anterior surfaces of the bodies of all the lumbar vertebræ, and—with some reservation—of the last dorsal vertebra, can be reached from the loin. A vertical incision is made near the outer edge of the erector spinæ; the sheath of that muscle and the quadrated lumborum are cut through; the psoas muscle is incised and the vertebræ reached by continuing the operation along the deep aspect of that structure. By means of this operation the vertebræ can be readily examined, carious or necrosed bone can be removed, a ready and direct exit can be given to all morbid products; an abscess situated in the psoas muscle or in the lumbar region can be evacuated whilst it is yet small and before it has led to a huge abscess cavity. If a large psoas or lumbar abscess exist it can be evacuated at its point of origin, and at a spot that, in the recumbent posture,

corresponds to its most dependent part. If Hueter's statement be true that the two vertebræ most frequently attacked by caries, are the last dorsal and first lumbar, the operation should be capable of frequent application. The author details three cases in which he performed this operation. All the patients made a good recovery. In one of the instances he evacuated at its point of origin a psoas abscess containing forty ounces of pus, and removed from the body of the first lumbar vertebra a large sequestrum measuring one inch by half an inch. The immediate improvement in this patient's condition was very marked. In another case the psoas abscess had been opened in the thigh some months previously. By this operation a counter opening was made at the point of origin of the abscess from the lumbar spine, and the entire abscess cavity was drained by a tube passing from the origin of the psoas muscle to its insertion. Mr. Treves added, that, with regard to the last case in the paper, the patient did well, but the boy had chronic lung disease and the drainage tube had to be removed and he died with extensive cavities in the lungs and amyloid disease of the liver and kidneys.

At the close of the argument which followed the reading of his paper, Mr. Treves replied that its object had been mainly anatomical, to show the best route by which to reach the spine and to open a psoas abscess. It was out of the question to attempt to scoop out caries bone from the bodies of the vertebræ.—*Lancet*.

KAIRIN IN ACUTE RHEUMATISM.

A paper by Dr. H. Menche, of Rheydt, published in the *Centralblatt für Klinische Medicine*, Number XLVII, 1883, forms a small but instructive contribution to the slowly accumulating evidence of the action of kairin, the latest antipyretic drug.

The experience of the writer as to its action in the pyrexial stages of pneumonia, pleurisy, and pernicious anæmia, is by no means so satisfactory as that of some other observers. It cannot fail to be noticed, however, that a very large dose was employed in every case.

In a case of asthenic pneumonia, in which one gramme of kairin was given every hour for seven hours, a marked reduction of temperature took place, but at the same time the toxic effects of the drug became very manifest.

It should be added, that large doses of quinine and smaller doses of kairin had been tried previously without result.

Depression of pulse, rigors, discoloration of urine, and a marked tendency to collapse were the symptoms accompanying the reduction of fever. In phthisis and anæmia similar effects were produced, severe smarting being also present in the former case. In a case of typhoid fever, in which hyperpyrexia had

been uninfluenced by baths and quinine, the administration of seven and a half grains of kairin every hour for five hours had a very powerful effect in reducing temperature, but at the same time severe rigors, great depression of pulse, and delirium rendered the features of the case rather more serious than they had been before. Noting the points of resemblance between kairin and salicin, namely, their rapid antipyretic effect, and their tendency to induce delirium and other toxic symptoms, Dr. Menche tried it upon a case of acute rheumatism. The patient had been ill for six days, and several joints had been affected. Three and a half grains of kairin were given three times in one morning, and seven and a half grains four times in the same afternoon. Severe smarting was induced. Less pain was felt, but the joints were still tender in the evening. On the following day the drug was given again in smaller doses, with still further relief to pain. A relapse followed in twenty-four hours, pain returning as severely as before, with signs of pericarditis. With the free use of kairin (seven grammes in twelve hours) the pain and febrile disturbance were again reduced. The whole illness lasted nineteen days, during nine of which the patient took fifty grammes of kairin.

A second case of a patient with long-standing mitral disease, was also treated with frequent doses, with equally good results. Dr. Menche's experience of the drug thus leads him to compare it favorably with salicylate of soda as an antipyretic in cases of acute rheumatism, but to use it with caution in cases of other specific fevers.—*Medical Times and Gazette*.

ACUTE PYÆMIA OF URETHRAL ORIGIN.

Dr. Weir presented kidneys and a heart, at the November meeting of the New York Surgical Society, illustrating acute pyæmia of urethral origin. They were removed from the body of an apparently healthy man, twenty-five years of age, who had been subject to gleet discharges, traceable to stricture. He had had instruments passed from time to time during the summer and in the autumn: Four days before death his attending physician introduced a sound number twenty-three, (French), which passed into the bladder without violence, and with no more difficulty than had been produced on all the other occasions. A few drops of blood escaped. The next day the man was seized with a chill. When Dr. Weir saw the patient he had a temperature of 105° Fahrenheit and he supposed it to be due to malaria, as he had known that the patient had suffered formerly from such chills, which had invariably yielded to quinine. The temperature, however, remained high, and within forty-eight hours afterward, he began to develop joint pains and effusions. He complained of no distress in the bladder but said once or twice he had noticed that the urine was very slightly

tinged with blood. The man became so delirious that he was removed to the hospital, where he died twenty-four hours afterward. Before death evidence of pericarditis and endocarditis was detected, and the opinion was formed that it was pyæmia. At the autopsy multiple infarctions with grayish centres were found in the cortex of the left kidney, the right being comparatively unaffected. Pericarditis and recent valvular disease with excavations at the base of the crusps (ulceratur endocarditis) were found and infarctions in the centre of the substance of the heart. The rapidity of the course of the base was especially interesting.—*Annals of Anatomy and Surgery.*

SOME CAUSES OF INFANT MORTALITY.

Where will you find a greater despot than the ignorant and generally conceited nurse who has the first care of the newly-born child? She knows all the laws of hygiene, and their application to infancy better than the most experienced physician; she insists on keeping its head warm and its extremities cool. It is fed whenever it cries, for it must be kept quiet so as not to disturb the mother, if it cries during the night a little soothing syrup will do, for the nurse needs rest. Generally during her administration everything works admirably; the mother believes that she is blessed with a quiet child, and looks forward to her recovery hoping that she will be spared many a restless night. The doctor believes his instructions have been carried out to the letter. Everything goes on pleasantly during the period of convalescence. The mother assumes charge of her child, to find that it is restless and fretful. It sleeps badly, suffers from colic, sprue or constipation; starts frightened from its sleep as one awakened from a terrible dream. No attention is spared to restore its former quiet; the traditional remedies are applied without effect. The patient grows no better, and the doctor is called in again. A careful inquiry is made; an empty bottle that once contained soothing-syrup is found, that panacea for all the ills to which helpless infancy is subject. Natural sleep returns gradually, and with it appetite and health. The mother has been made much wiser; the doctor gained his experience years ago.

The poor child is destined still to suffer. It was hoped that a change of nurses would bring permanent relief; but no, family traditions cannot be set aside. The child sleeps from early in the morning until late in the afternoon; it awakes hungry and is fed until it refuses more. Soon the excess of milk begins to ferment. Flatulence disturbs the stomach and bowels; the curdled milk is thrown off and the child is again hungry. The same process is repeated and the bowels soon become hard and distended. The child cries from pain, but the mother thinks it is hungry and gives it more milk, and thus the struggle goes on

until the little sufferer towards morning goes off into an unquiet sleep from mere exhaustion. Day after day the child passes through the same routine. It is carried in the arms all night; sometimes it is shaken, and when the mother is tired it is bounced on the knee. The little sufferer becomes exhausted, emaciated and if warm weather comes on while it is in this state, diarrhoea, cholera infantum, and all the nervous affections that are likely to accompany the period of teething follow in train.—T. P. Corbally, A. M., M. D., in *Sanitarian*.

ARREST OF THREATENED MAMMARY ABSCESS.

In cases of threatened mammary abscess, writes James Braithwaite, M. D., in the *Lancet*: I have for many years, with very successful results, given three consecutive doses of ten grains of quinine at intervals of twelve hours, at the same time using the usual local application of belladonna. He regards the best cases for the treatment, are those occurring during lactation, and it is less suitable immediately after delivery. It is not indicated when the bowels are confined and the tongue furred. In patients who do not bear large doses, the first dose of ten grains may be followed by two of five grains each. He has seen pain and tenderness disappear within forty-eight hours, the hardness remains for some days longer, and the inflammatory symptoms may recur, but are again checked by the same treatment. The writer had used belladonna for years before the addition of the quinine, and has marked the greater rapidity and certainty of the result when the quinine was used.

THE PROPELLER BONE.

"The thing which hath been, is that which shall be;
And that which is done is that which shall be done;
And there is no new thing under the sun."
The innominate can now be appropriately called the propeller bone.

The early anatomists, in giving names to the various bones composing the human skeleton, called many by such as their analogy presented to existing objects; in doing so they permitted their fancies to be very much enlarged and exaggerated. So many points of dissimilarities will have to be allowed if we would fully concur with them. In giving names to the bones of the pelvis, with their natural articulation and soft parts, without much stress of imagination they could appropriately speak of them collectively as forming a true *basin*. Nor was much difficulty perhaps presented when they disarticulated the osseous structure that formed that cavity, and gave to its separate bones their appropriate names. On each side of this basin the bones soon unite, and in the adult have so blended as to present a very large bone, whose irreg-

ular shape and roughened outlines gave them no clew or resemblance to any known form or object, hence they called it the innominate or nameless bone.

This large, ugly bone, which up to the present time no one has seen fit to grant shape or form, is a *fac simile* of a *marine screw propeller*, with angles, shape and performances similar to those used for propelling sea going vessels. To demonstrate this proposition, a pleasure boat fifteen feet long was fitted up and driven by one of these bones very satisfactorily.

In conducting the experiment all that was changed was to place a piece of flat bone so as to span the obturator foramen, which only replaces the obturator membrane that exists normally. While this is not necessary, it prevents the water from flowing through the aperture as well as to counterbalance the ilium end, which is more dense in structure and presents so many processes. Another similarity may be noticed: one innominate with its opposite fellow presents a right and left hand screw, which according to nautical nomenclature are known as twin propellers, and are both modes of marine propulsion. In pursuing this analogy still further, independent of the striking resemblance in form that exists, there is still a strong coincidence as to the use the propeller and the innominate bone bear as auxiliaries to motion. Both act only as accessories; the former, acted upon by an internal force generated within the vessel, sends her through a yielding medium; the latter, though a little more passive, performs the same subordinate office in the human economy by affording attachments for levers and appliances which are so regulated and adapted by a perfection of machinery and force as to give to man his remarkable power of locomotion. In this investigation two changes were made in the arrangement of this bone that differ from it as presented in the body. One, as stated, was to close the hole with solid material; the other consisted in reversing the surfaces, making the internal the driving one. This was done because if placed vertically to the end of the boat the large depressions are hid, and present to the eye a smooth and more graceful appearance. These abnormal changes did not give as good results as when conformity to the natural condition was followed. Why this was a fact, no theory was available to explain until it was solved by reference to the *Scientific American*, August 30, 1879, which describes Deane's patent propeller, whose blades are represented having depressions with holes through them. He claims these holes are necessary to partially overcome the vacuums created by all other propellers, and gives to his its peculiar merit and advantage. Strange to say, these depressions with holes are found upon this bone, and are arranged upon just such scientific principle as claimed in his invention.

From the above it is apparent that this nameless bone has

double claims for restitution and justice; and when future anatomists are planning their modern works, the old innominate should be no longer slighted, but by its *push* gain for itself either an appropriate name or be granted a more definite shape. As a summary, we have only added another link to the strong chain of evidence that speaks so potently to prove that many of our modern inventions, and especially those that are to be the most important factors for man's development and advancement, are but duplicates and principles fully illustrated and operative in a being that the good book admonishes us to investigate if we would know for ourselves.—Dr. C. Marion Dodson, in *Scientific American*.

THE TOTAL DESTRUCTION OF HUMAN BODIES.

M. Aimée Gerard, having lately proposed at the Académie des Sciences, the destruction of the bodies of animals, dying of virulent diseases by means of sulphuric acid (as their interment does not always secure from the danger they may cause), M. Régnard resolved to try the effect of this substance upon the human subject. His experiments with the bodies of new born infants, and fetuses have been completely successful, and would no doubt be equally so if tried on the adult. To the body of an infant he adds about double its weight of the sulphuric acid of commerce, and after about twenty-four or thirty hours of maceration, not a vestige of the body remained—the decomposition having taken place silently and without any smell. Neither the microscope nor the test-tube can detect the slightest trace of the body beyond the presence of some fat, phosphoric acid and nitrogen. M. Régnard points out how easily a body may be made away with by means of a substance so easily procured, and suggests that some restrictions should be placed on its sale.—*Medical Times*, from *Revue Med.*

ANTISEPTICS IN GERMANY.

Dr. Lardy, on a visit to Germany, in a letter to the *Union Medicale* furnishes some information with respect to the antiseptics now most in vogue in that country. The somewhat exorbitant prices of the Listerian dressings, and the search after a perfect antiseptic have, he says, not a little modified the practice of surgeons of late. The employment of the spray is more or less abandoned and is now only resorted to for the purpose of disinfecting the theater before the operation. It is advantageously replaced by the frequent washing of the hands in a disinfecting solution and by the more or less continuous irrigation of the wound and its vicinity by a one or two per cent. carbolic solution, solution of corrosive sublimate, etc. The

enthusiasm for carbolic acid has much abated and in many universities its solution is only employed for the disinfecting of instruments, because it does not damage these. For other purposes that excellent disinfectant, corrosive sublimate is preferred for its cheapness, and rapidity with which very weak solutions destroy the very spores of infecting organisms. The solution most generally employed are one per one thousand for infected wound, two per one thousand in ordinary cases, one per five thousand for irrigation during the operation and one per ten thousand in laparotomies, in which the object is direct injection of the peritoneal cavity. The results are excellent. In a certain proportion of cases some absorption of the agent is indicated by a slight elevation of temperature for two or three days at most, but this is very rare. The secretion of the wound is not abundant under the sublimate, and very good healing by first intention is obtained. The solution of this disinfectant has also the great advantage of not rendering the skin of the hands so rough as carbolic acid. *Chloride of zinc*, much recommended by Kocher of Bern, also furnishes good results in solution of two per one thousand, and is especially employed in washing out the peritoneal and pleural cavities, presenting as it does little danger of absorption. It is curious that Koch of Berlin, should still deny its antiseptic value, for experience shows that he is absolutely wrong. More recently, Professor Kocher has proposed the *subnitrate of bismuth*, the disinfecting power of which seem to be more than iodoform, while it is exempt from the danger of the latter. For the irrigation of wounds a solution of one or two per one thousand. It may also be employed in powder or a bismuth gauze of from ten to twenty per cent. is easily made. Professor Socin, of Bâle, has recently proposed *oxide of zinc*, which is preferable to bismuth only when more concentrated solutions are required. These two last antiseptics are also employed in the form of a paste in order to close in a hermetic fashion wounds recently sutured and with bismuth used in this way splendid cicatrization by first intention may be obtained. Last summer a mixture of sugar and naphthalin was used at the Strasburg clinic and Professor Lücke, a great admirer of popular remedies, was full of enthusiasm for the new treatment. Iodine water, thymol, and salicylic acid may be mentioned, although their employment has not become generalized; but on the other hand, concentrated *tincture* of iodine has attained more and more favor as an energetic disinfectant in septic wounds, the cavities of abscesses, and mortified and fetid soft parts. Iodoform is employed now more in France than in Germany, where fear of intoxication prevails. It is especially in favor, like naphthalin for small dressings at the dispensaries. For dressing wounds successive layers of the bismuth paste are applied, which are covered by a simple gauze that had been previously soaked for some hours

or some days in a solution of carbolic acid, sublimate or bismuth—squeezing out the liquid at the time of application. This gauze costs infinitely less than that of Lister, and analogous gauzes, and furnishes quite as good results. Nearly every clinic has its own procedure, from carbolised jute to turf, moss, sand, ashes, saw-dust or powdered glass; marsh turf, moss and saw-dust are washed in abundance of water, dried and roasted at a temperature of from 100° to 150° centigrade, and disinfected in a sublimate solution of one or two per cent. They are then dried, put into bags, and placed over the dressing in the same way as wadding.—*Medical Times*.

MITRAL CONSTRICTION.

Simple mitral constriction is of far more frequent occurrence than is generally allowed, and its diagnosis probably presents greater difficulties than any other serious lesion of the valves on the left side of the heart. We exclude from consideration cases which are complicated by regurgitation, because the latter, when advanced enough to produce grave symptoms, is easily detected; and the presence of constriction as well in such cases is not of great practical importance. But when, as not rarely occurs, the question is whether stenosis of the mitral orifice be present, and the cause of serious symptoms, or whether the heart be healthy, and the distress and danger due to other conditions, accurate diagnosis becomes a matter of the utmost moment. In a typical case the observer feels a thrill at the apex preceding the impulse of the heart; he hears at the base a clear second sound over the aortic valves, an exaggerated one to the left of the sternum, and at the apex a rolling presystolic murmur, gradually increasing in intensity and leading up to a short and sharp first sound, which is not succeeded by any appreciable second sound. The diagnosis of mitral stenosis under such circumstances admits of little doubt.

But in a second series of cases both murmur and thrill may be absent, and the heart's action regular, and the difficulty of detecting the disease then becomes great. The most striking auscultatory phenomena are accentuation of the second sound at the base to the left of the sternum, and, what is of much greater importance, a peculiar hesitation in the production of the first sound, a kind of hanging-fire, which is easier for the experienced auscultator to appreciate than to describe. Whatever be its origin, whether it be a faint sound caused by the blood passing through the constricted orifice into the ventricle, and so practically a murmur, or be due to a slowly beginning, though suddenly ending, ventricular contraction. It is a phenomenon which at once strikes the ear and suggests the nature of the disease, on these and all other cases of suspected constriction of the mitral orifice, the detection, if possible, of the

increase in size of the left auricle and right side of the heart, yields valuable corroborative evidence.

There is a third class of cases, in which there may be no murmur, no thrill, no hesitating first sound, but extreme irregularity of cardiac action, the beats being very frequent and very irregular both in rhythm and in force; so much so that a great many of them produce no pulsation at the wrist.

In some cases as many as half the beats of the heart are not felt in the radial artery, so that the pulse there may be moderate infrequency, although the cardiac contractions succeed each other with extreme rapidity. Similar phenomena may likewise be observed in cases of simple dilatation of the heart with degeneration of its walls, such as occurs, for example, in chronic bronchitis and emphysema; but then the patient is usually past middle life.

If grave cardiac symptoms be found in a comparatively young person, and if auscultation only reveal extreme irregularity in the heart's action, the presence of mitral stenosis ought to be at once suspected. The administration of digitalis in such cases not only often removes the patient's distress, and produces regularity and normal frequency of the heart's beats, but also facilitates diagnosis. For when the heart's action gets slow and regular a presystolic murmur frequently makes its appearance.

Finally, there are cases of considerable mitral constriction, which produce no sufficiently well-marked morbid phenomena to enable the observer to detect the presence of heart disease. But the pathologist not infrequently meets with these narrowed orifices in the postmortem room, in patients, who have died from other diseases. The reflection is then forced upon him, how extreme some pathological conditions require to be before they come within range of our present powers of diagnosis.—*Medical Times and Gazette*.

SEPTIC PNEUMONIA IN INFANTS.

Dr. Oscar Silbermann draws the following conclusions (*Deutsches Arch. für Klinische Medicin*) from an analysis of twelve cases of septic pneumonia occurring in infants:

(1) The septic pneumonia of new-born and infants always originates with a tracheo-bronchitis, and is to be regarded as a catarrhal pneumonia, in many cases due to the presence of a foreign body; (2) it may be produced by inhalation of decomposed amniotic fluid or genital secretions, or through inhalation of infected air in cases of septic infection of the mother; (3) the septic pneumonia of the new-born frequently originates with disease of the pleura but seldom with disease of other organs, in contradistinction to other septic processes in infants, which are usually associated with multiple points of origin;

(4) the alveoli and bronchi of children dying from septic pneumonia are always filled with masses of bacteria; (5) the blood in cases of septic pneumonia in infants shows a great increase in the white corpuscles, with breaking down and solution of red blood disks; (6) jaundice is a constant accompaniment of this disease; (7) the disease usually originates from one or two days after delivery; (8) the disease is always fatal, usually on the third or fourth day after birth; (9) the access of septic material to the lungs in the new born is favored by insufficient closure of the glottis and by the shortness of the main bronchi; (10) the wide distribution of the septic process in the lungs is due to active epithelial disquamation and the narrowness of the finest bronchi, as well as the feeble muscular apparatus of the respiratory organs of the new born child.—*Medical Times*.

TREATMENT OF TONSILLITIS.

Writing on the treatment of tonsillitis Dr. Carl Seiler, of Philadelphia, says, he has not found anything better than a strong solution of nitrate of silver, sixty to one hundred and twenty grains to the ounce, applied with a brush to the inflamed gland; and, if the remedy is resorted to early in the disease, the symptoms almost invariably subside within a few hours. If, however, the inflammation has lasted for a day or two, the silver solution will not abort the attack, but it will in most instances prevent suppuration. In instances when repeated attacks occur, he regards it best to remove the glands as they are always more or less hypertrophied after an attack has passed off. If they are too small to be grasped with a tonsillotome the galvano-cautery knife can be used.

On the subject of pharyngitis the writer remarks that it is gratifying to notice that the present workers in laryngology say very little about it in its different phases. This affection, which a few years ago, was looked upon by the practitioner as the ready explanation of almost all throat troubles, and accordingly treated vigorously with probang and brush, is now known to be in most instances merely a symptom of nasal catarrh, or of gastric irritation, and will disappear with the removal of the cause without any direct local treatment.—*Medical Times*.

MISCELLANEOUS ITEMS.

FLUID extract of gelsemium is recommended for after-pains in patients that do not bear opium well.

THE French government has decided that the importation of American salted meats into France shall continue to be prohibited.

THE *British Medical Journal* circulates over twelve thousand copies.

BALTIMORE has been having a severe epidemic of measles. The mortality has been as high as twenty per week.

DR. REICHERT, late professor of anatomy in the University of Berlin, died recently at the age of seventy-three.

PILOCARPINE in doses of one-third of a grain, hypodermically, has been used successfully for puerperal convulsions.

THE concentrated tincture of *avena sativa* in five drop doses, three times daily will destroy the morbid cravings for intoxicating liquors in dipsomaniacs.

THE Cartwright Lectures for 1884 were delivered by Professor Burt G. Wilder, of Cornell University. The general subject was "Methods of Studying the Brain."

TINNITUS following the administration of large doses of quinine may be entirely avoided by combining it with ergotin in the proportion of sixteen grains of ergotin to fifteen grains of quinine.—*Quinologist*.

PHILLIP LEIDY, M. D., of Philadelphia Pennsylvania, has used Churchill's preparation as made by J. A. McArthur with the most decided benefit, and is satisfied that a fair trial is all that is required to establish its therapeutic value.

AFTER many years' experience with Kennedy's Extract of the *Pinus Canadensis*, James C. Nidelet, M. D., 618 Olive street, of Saint Louis, Missouri, unhesitatingly states that its use in all diseases affecting the mucous membrane is invaluable.

DR. ROHRER, manager of the Riesbach Hospital, Zurich, has found, after much experience, that the Anglo-Swiss Milk Food is an excellent substitute for mothers' milk in cases of disturbed digestion, diarrhoea, etc., that it agrees very well indeed with the children and is willingly taken by them.

OBSTINATE HICCOUGH.—Dr. Ruhdorfer reports a case of hicough which had lasted three months being cured as if by magic by the hypodermic injection of three centigrammes in solution of hydrochlorate of pilocarpine. Dr. G. C. Kingsbury writes in the *British Medical Journal*, that a case of persistent hicough, which for twelve days had resisted many different remedies and measures usually employed with success, at last yielded to a thirty grain dose of chloral hydrate.

THE BEAUTIFUL SNOW.—A Swiss scientist, Floegel, has found in the residue from the evaporation of freshly fallen snow, living infusoria, and algae, bacilli and micrococci mites, diatomes, spores of fungi, fibres of wood, mouse hair, pieces of butterfly wings, skin of the larvæ of insects, cotton fibres, pieces of grass, epidermis, pollengrams, rye and potato flour, grains of quartz, minute pieces of roofing tiles, with bits of iron and coal. Let the poet now sing "Once I was as unpure as the Snow."

ALCOHOL VS. STRYCHNINA.—At a meeting of the French society of temperance held on December 23, last, the subject of antagonism of strychnia and alcoholism was discussed. It would appear that whilst strychnia is capable of controlling the functional manifestations of drunkenness, yet it has contended that it had no influence for good over the effects of alcohol in the organic tissues, for example, cirrhosis of the liver. We understand from the report that the alcoholised individual when also strychnised did not appear intoxicated, but was nevertheless just as liable to.—*Lancet*.

RETENTION OF URINE CAUSED BY RETENTION OF MENSES AND IMPERFORATE HYMEN.—Mr. Wherry related to the Cambridge England Medical Society the case of a girl who had suffered from retention of urine, having had great difficulty in passing water for twenty-one weeks, and having frequently required the use of the catheter. There was no hysteria. She was seventeen years old and had never menstruated. An unperforate hymen was found which protruded between the labia minora, this was incised and a large quantity of tarry fluid escaped, and continued discharging during a week. The pain and difficulty in passing water disappeared. After ten days the thick, tough membrane, found to be the hymen, was freely divided, and the vaginal passage and os uteri were found to be normal.—*Lancet*.

INJECTIONS INTO THE UTERINE TISSUE.—Dr. Schücking proposes to treat (*Berliner Klinische Wochenschrift*) certain maladies of the uterus by injecting the medicament directly into the substance of the organ. The advantages of this method are two: it is local; it causes much less pain than subcutaneous injections. The remedies so employed are ergotin. Fowler's or Pearson's solution of arsenic, tincture of iodine, carbolic acid, and some other agents. The principal diseases thus treated are subinvolution, chronic metritis, fibroids and some forms of displacement. The ordinary hypodermic syringe, with a long needle, to reach through the speculum into the tissue will answer the purpose. The solution must be concentrated as the tissue of the organ is too dense to admit more than a few drops.

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ORIGINAL ARTICLES.

AN EXPERIMENT WITH REFERENCE TO THE PHYSIOLOGY OF THE INTERMITTENT HEART-BEAT.

BY HENRY SEWALL, PH. D., M. D.,
Professor of Physiology in the University of Michigan.

Not long since there was brought to the physiological laboratory a dog, which exhibited in a striking manner the phenomenon of the intermittent pulse. The animal was full-grown and in good health. The degree of intermittence at different times was very variable; on some days the irregularity of heart-beat was hardly noticeable, while at other times the beats fell into groups of from two to four, with distinct intervals of rest between. No relation was observed between the phenomenon of intermittence and the stages of digestion, but there was a marked decrease in the irregularity, whenever the animal became mentally excited, and apparently muscular activity had the same effect.

Dr. Steiner, assistant in physiology, and myself availed ourselves of the opportunity of making a physiological study of this most common, but none the less obscure, phenomenon of cardiac pathology. Though the records of a single experiment must, on several accounts, be viewed with suspicion, the results of this work agree so well with much that we know of the physiology of the heart that it is thought well to put them into permanent form, if for no other reason than to suggest an inter-

esting theme for other experimenters. The observations following were made upon a day when the pulse was most regular. The dog was first, with gentle handling, made fast upon his back, and a pulse tracing, figure one, was taken by means of a Pond's sphygmograph, from the femoral artery. As is seen in the figure, the pulse is tolerably regular, there being but two diastolic pauses of unusual length.

The dog was now made unconscious by chloroform vapor, Tracheotomy was performed and a loop-clamp was placed ready for use round each common carotid artery. These clamps are made by fastening a horse-hair at one end in a short glass tube of small calibre; the free end of the hair is passed around the artery and back through the tube, so that when the hair is drawn tight the artery is pressed against the end of the tube, and the blood-flow through it is arrested. The arterial blood pressure and pulse were first recorded from the axillary artery by means of the ordinary mercury manometer, whose floating pen wrote upon the smoked paper covering a revolving cylinder.



FIGURE ONE.

While the animal was lightly under the influence of chloroform the blood pressure and pulse rate were normal, the pressure being equal to a column of mercury about six and a half inches high, and the pulse 138 in a minute. When the narcosis became deeper the pulses were frequently alternately stronger and feebler. After thus registering the blood pressure, the mercury manometer was changed for a Fick's spring manometer, an instrument which does not well show changes in blood pressure, but which records the form and number of the pulse waves with great exactness. It is well known that pressure upon the abdominal aorta produces reflexly slowing of the heart-beat, presumably because the increase of blood pressure in the brain stimulates the cardio-inhibitory center in the medulla, thus exciting the inhibitory fibres passing to the heart in the pneumogastric nerves. Through a slit in the abdominal wall of the dog under observation, a finger was passed and pressed upon the aorta above the level of the kidneys; the operation was attended by a distinct rise of blood pressure but by no change whatever of pulse-rate. Though this negative result is unusual, one cannot venture, without further evidence, to draw from it any conclusion. When the blood pressure in the brain is diminished, as by occluding the carotid arteries, the pulse-rate is quickened because, as usually taught, diminution of pressure in the brain

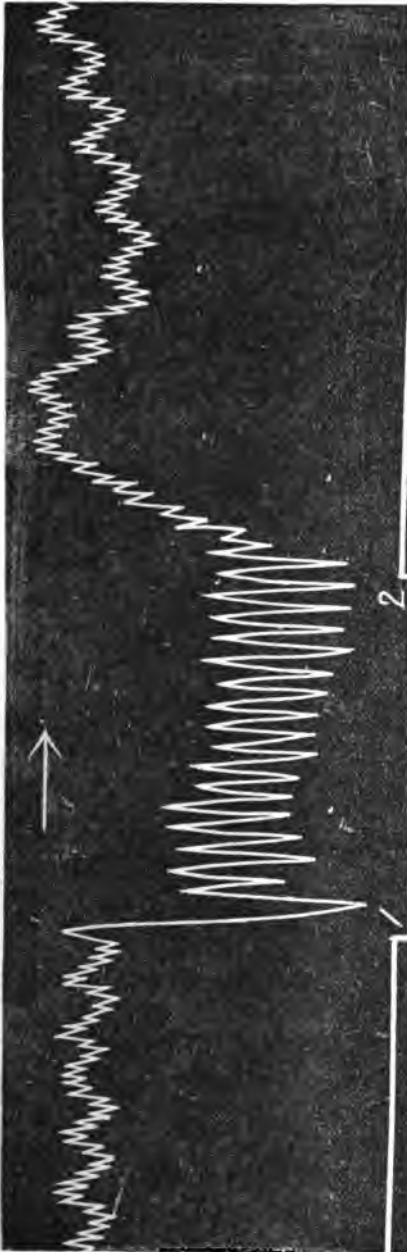


FIGURE TWO.

stimulates the accelerator heart-centers there to activity. In our dog, sudden clamping of the carotid arteries had the usual effect of quickening the heart-beat, the pulse-rate rising from 120 to 132 beats per minute. Thus far the investigation threw no light upon the subject studied. Both pneumogastric nerves were now prepared in the neck, cut through, and each peripheral trunk was inclosed in a pair of Ludwig's shielded electrodes. The stimulating current was obtained from the secondary coil of a *des Bois'* induction apparatus, the interruptions of the primary current being made by an automatically vibrating tuning fork. The shielded electrodes were joined together by one terminal of each, so that every electric shock passed simultaneously through both nerves. In the normal dog, when the vagus nerve is divided in the neck and the end still in connection with the heart is electrically stimulated there follows a regular slowing of the heart-beat, or the beat may be completely arrested when the stimulus is sufficiently strong. Figure two is

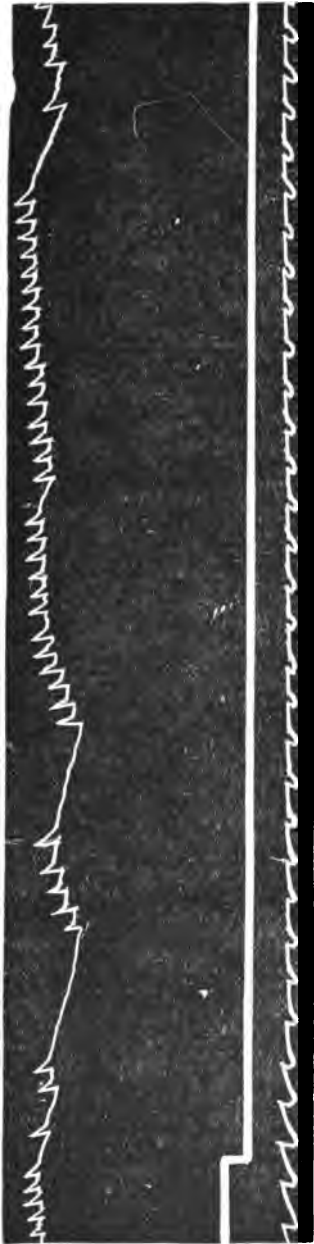


FIGURE THREE.

a tracing representing the typical effect of vagus stimulation upon the pulse and blood pressure of a healthy dog. The upper line is the blood pressure curve as registered from the femoral artery by means of the pen of a mercury manometer. The larger waves near the ends of the line are the so-called respiratory waves, while the smaller ones are pulse waves. The lower line was made by the marker of the stimulating key; the depression at one shows the moment when the stimulating current was sent into the nerve, and the return of the line at two, marks the cessation of stimulations.

The beginning of irritation is accompanied by a great slowing of the pulse; there is a considerable fall of blood pressure, because less blood is pumped out of the heart in a unit of time, and each pulsation has great amplitude because of the relaxed condition of the arteries. It is evident, however, that the retarded pulse of inhibition is quite regular in its rhythm. Figure three is a vagus pulse tracing, obtained by means of the Fick manometer, from the dog which was the subject of the experiment described in this article. The distance between adjacent notches in the lower lines represent intervals of a second, while, as before, the left-hand depression of the middle line marks the moment of beginning stimulation, and its elevation on the right marks the end. The effect of the irritating current upon the pulse is very remarkable; after a short period of irregular retardation, there are long pauses separated by intervals, which are occupied by pulsations succeeding each other at nearly the normal rate. Figure four represents a tracing obtained by the use of a weaker stimulating current than that previ-

ously employed. There is a very striking resemblance between the irregular inhibition produced by this artificial excitement of the vagi, and the pathological irregularity of the intermittent pulse. So close is this likeness that it seems very probable that the pathological phenomenon may be due to the direct inhibitory action of the vagus nerve, and, as in our experiment, the strength of the stimulating current remained constant during each observation, the irregular rhythm of the heart-beat could not be due to variation in the intensity of impulses descending the vagi, but its cause must lie in the heart itself, that organ becoming at irregular intervals alternately more and less sensitive toward the inhibitory influences reaching it. One obvious

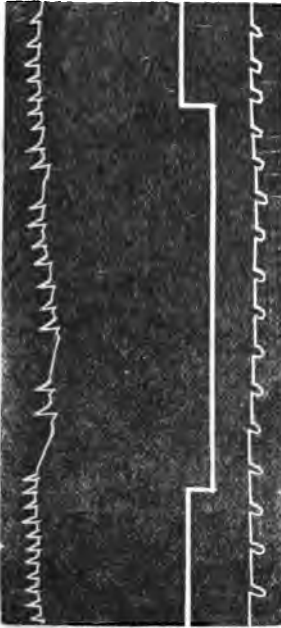


FIGURE FOUR.

and fundamental suspicion might be cast upon this experiment, namely, that during the intervals when the stimulating current was without effect upon the pulse it was not passing through the nerves at all, owing to slight shifting of the electrodes or other causes. The nerves were prepared and fastened in position with such care that this objection did not present itself fully at the time of the experiment; and it loses much of its force when we observe that the weakest efficient currents produced the same character of inhibition as the strongest, which could be used without a prolonged stopping of the heart-beat.

Evidence for a rhythmic inhibitory action of the vagus nerve upon the heart-beat is not wanting. According to Cyon * when the vagus is submitted to prolonged electrical stimulation with a rather feeble current, the slowing of the pulse-rate is not continuous, but there are periods of slower vagus-pulses alternating with groups of beats of the normal rate. Morphia narcosis is accompanied by a slowed pulse-rate due, according to Cyon, to excitement by the drug both of the carotid-inhibitory center in the medulla and some inhibitory mechanism in the heart itself. The pulse of a dog under morphia is frequently characterized by great difference in the force of the alternate heart-beats, strongly suggesting some forms of ordinary pathological "intermission." It is hardly necessary to call attention to the well-known connection between irregularity of the heart's rhythm and disorder of the digestive apparatus, and to the easily demonstrable fact that the heart's action is in intimate phys-

* *Methodik Ter Vivisectionen*, page 179.

iological relation with impulses reaching the organ reflexly from the abdominal viscera by way of the cardio-inhibitory center in the medulla.

It is by no means intended to assert that all irregularity of heart-beat is due to excitement of inhibitory extra-cardiac nerves. Heidenhain* has found that electrical stimulation of the medulla after section of the vagi, often brings about an extremely rhythmic pulse, which is presumably directly caused by the sudden great increase of blood pressure produced by the stimulation.

In conclusion, so far as one may venture to express an hypothesis suggested largely by a single experiment, we are led to suggest that some kinds of pathological intermission in the heart-beat are due to inhibitory impulses reaching the heart by way of the pneumogastric nerves; moreover, that the want of regular rhythm is not due to irregular action of the extra-cardiac center, from which the inhibitory nerves arise, but to some irregular resistance offered by the motor mechanism of the heart to the action of the inhibitory impulses, probably in such a manner that the latter are summated in the heart until they attain sufficient intensity to occasionally stop its beat altogether; while, in the normal heart the relation of action power and resistance to action is so adjusted that the two forces continually, with a given pulse-rate, bear a fixed ratio to one another.

A CASE OF LEAD POISONING.

BY DANA C. LEWIS, M. D., BROOKLYN, NEW YORK.

The following case illustrates the difficulty that may present itself to any practitioner when called upon to relieve a person who is constipated from any accumulated poison of this character—lead.

John F., aged about twenty-five years; American. This man's history shows that for three and one-half years he has worked at the trade of painting. He came to my office on the afternoon of February 25, suffering from lead colic. The history was plain, and together with the pain, the flattened abdomen, and the dark line on the gums made the diagnosis easy, and he was told to drink a pint of liquor magnesiæ citratis in the morning. He was given a small morphia powder to relieve pain if necessary.

In the morning I saw him at his residence. He had not slept during the night, and his bowels were as constipated as ever. His pain was more severe. Glysters were ordered every hour. He was given one-eighth grain elaterium (Clatterbucks) to be repeated in six hours if bowels did not move. A mustard

* *Pfäuger's Archiv*, Band V, page 143.

sinapism was ordered, to be followed by hot fomentations. The second elaterium powder was taken,—and without effect! I now prescribed two powders, each containing thirty grains of extract of jalap. Forty-five grains were taken—and *no stool!* Five drop doses of extract conii fluid were given hourly, with only partial effect in relieving pain. Opium was substituted in the evening (third day) in half grain doses—*pro re nata*.

On the evening of the third day, the jalap not proving effective, I gave him an enema of one pint of fresh oxgall and two drops of croton oil. Beyond producing considerable tenesmus, there was no effect. Just under the stomach, on the *left* side could be seen a tumor about the size of a pint bowl. This with the vomiting that commenced on the evening of the third day, the accelerated pulse, the frequent eructations of gas and the severe pain, seemed to indicate the possibility of error in diagnosis, and that instead of colica metallica I had a case of intussusception to deal with. But the plain history, embodying the fact that two years ago, under precisely similar pathological conditions, one of Brooklyn's ablest physicians labored *ten days* to produce a catharsis,—that the pain was migratory and the vomited matter and the gaseous eructations were *not* stercoraceous in character or odor, made me hold to my former diagnosis.

After these failures to produce evacuations, I determined to try the efficacy of croton oil in drop doses, daily—hoping by this means to cause sufficient excretion of intestinal fluid to soften and carry away the fæcal accumulation that was present. Enemas were discontinued. Eggnog, milk and beef tea, in small doses, frequently given were directed. And for local use a lotion:

R. Tr. acniti rad..... ʒss.
 Lin. chloroformi,
 Lin. saponis..... aa ʒij.

To be used with the opium to relieve the pain.

On the evening of the seventh day he took:

R. Ol. tiglii..... gtt. j.
 Ol. ricini..... ʒj. M.

At 4 o'clock the next morning he had a small passage containing one or two very small fæcal masses. At 7 A. M. he took another drop of the croton oil and in the evening he had two good stools.

Hydrargyrum chloridum mite in five grain doses, three times a day, was now substituted for the oil. Stools became frequent and copious in quantity. An attack of œsophagitis followed the use of the croton oil which lasted three days. On the twelfth day there was given potassium iodide in gradually increasing doses, and directed to have a purge every third day for three weeks.

March 13: To-day he is free from pain and feels as well as ever. Has had several passages without a powder. Case discharged.

DIARRHŒA AND NERVOUS SYMPTOMS CAUSED BY TIGHT
PREPUCE: CIRCUMCISION: CURE.

BY W. E. YOUNG, M. D., LISBON, DAKOTA TERRITORY.

The following case illustrates the very marked relation between the organs of generation and the nervous centers located in the medulla oblongata: I was called November 15, 1883, to see H. R's. child, a boy aged fourteen months. He had always been troubled with frequent attacks of vomiting and diarrhœa, and had suffered with nervous symptoms coming on at night. These manifested themselves in the grinding of the teeth, rolling of the eyes, and other symptoms that precede an attack of convulsions.

He fretted and cried before and during every act of micturition. This last mentioned symptom led me to examine the penis. I found a very much elongated prepuce with a very contracted opening. Circumcision was recommended which, with the assistance of Dr. Herrick, was performed.

November 31: Firm adhesions were found between the prepuce and the glans penis, which were separated after experiencing considerable difficulty. A number of small white shot-like bodies of solidified secretion, were found behind the corona. Torsion was necessary to stop free bleeding from the artery of the fraenum.

That night, for the first time in his life the little patient urinated without fretting, and rested well. The second night he slept better than he had any previous time since he was two months old. His nervous systems have nearly entirely disappeared; his digestion is good, his bowels are no longer deranged, and his health has in every way been rapidly improving.

TREATMENT OF PERTUSSIS BY ERGOT.

BY H. L. HARRINGTON, M. D., BOSTON, MASSACHUSETTS

Ergot is said by some writers to act as a sedative to the periphery of the nerves of the mucous membrane. Whooping-cough has been very prevalent in our city this winter, especially among our dispensary patients, and as many such have come under my care in my dispensary out practice, I was advised to try ergot with some of them. I have done so, and will state briefly the results of its use in a few cases.

D. H., boy, five years old. First saw him February 9, but thinking he had taken a heavy cold, I treated him accordingly.

February 12: Appetite good, bowels regular, tongue clean looking, temperature normal, but cough resembles pertussis, has long coughing spells which are very heavy and often repeated, raises a good deal of blood with the cough, also has hemorrhage

from the nose at the time, vomits a good deal, cannot keep any food on stomach, does not sleep nights.

R. Extractum ergotæ fluidum..... 4.
Potassii bromidi..... 6.
Syrupus simplex,
Aquæ..... aa 60.

M. S. Teaspoonful every three or four hours.

February 15: Is much better, does not raise any blood while coughing.

February 18: Does not vomit, coughs but little, appetite is good, sleeps well.

February 25: Has been improving every day.

February 26: Cough has entirely disappeared, seems quite well.

J. M., boy, one year old. March 3: Made my first visit; child coughs hard and often; vomits most of his food; cannot sleep.

R. Extractum ergotæ fluidum..... 2.
Syrupus simplex,
Aquæ..... aa 60.

M. S. Teaspoonful every three or four hours.

March 6: Much better; cough is not as hard, and does not cough as often; does not vomit; sleeps well. Ergot increased to twice the amount at each dose.

March 9: Is improving every day.

March 12: Coughs but little and seldom; sleeps well.

H. K., girl four years old. On February 18, I found her coughing a good deal, especially at night; vomits her food quite often; cannot sleep nights.

R. Extractum ergotæ fluidum..... 4.
Syrupus simplex,
Aquæ..... aa 60.

M. S. Teaspoonful every four hours.

February 20: Has had a great deal of headache; face quite red most of the time (probably due to the ergot), medicine ordered on the 18th discontinued, and gave the following:

R. Extractum ergotæ fluidum..... 4.
Potassii bromidi..... 6.
Syrupus simplex,
Aquæ..... aa 60.

M. S. Teaspoonful every four hours.

February 25: Cough is improving every day; is free from headache; does not vomit as often, and sleeps better nights.

During the next four days medicine was not given regularly, and cough grew worse.

March 4: Has had medicine regularly during past three days and is much better.

March 7: Coughs seldom; sleeps well at night; appetite good; does not vomit her food.

March 10: Quite well.

J. B., girl, three years old. Lobar pneumonia with pertussis. First saw her February 23. Her cough was hard and often repeated; she had hemorrhage from nose and mouth during the paroxysms; vomited all her food; slept but little night or day. Temperature, 102; pulse, 140; moaned with every breath. I tried the ergot treatment for the cough; also treating the pneumonia at the same time, but without any success as far as her cough was concerned.

February 7: Is convalescing from the pneumonia but cough is still very severe.

C. M., four years old. Made my first visit March 3. Child has a racking cough; paroxysms are severe and often repeated; vomits often and cannot sleep nights.

R. Extractum ergotæ fluidum..... 4.
 Syrupus simplex,
 Syrupus tolutanum..... aa 30.
 Aquæ..... 60.

M. S. Teaspoonful every three hours.

March 6: Does not cough as often or as hard; sleeps well; does not vomit as much.

March 9: Is improving every day.

M. H., girl, two years old. On February 18, I found her coughing a good deal, especially at night; could not sleep at night; vomits a good deal.

R. Potassii bromidi..... 4.
 Syrupus simplex,
 Aquæ..... aa 60.

M. S. Teaspoonful every four hours.

February 20: Still coughs badly; does not seem to be any better; medicine ordered on the 18th to be discontinued, and give:

R. Extractum ergotæ fluidum..... 4.
 Potassii bromidi..... 6.
 Syrupus simplex,
 Aquæ..... aa 60.

M. S. Teaspoonful every three or four hours.

February 25: Has improved a good deal, but medicine was not given regularly during next five or six days, and cough was much worse.

March 7: Has been having her medicine regularly during the past three or four days, and is daily improving; sleeps well at night; does not vomit her food, and coughs but little.

March 10: Improves every day.

N. B., girl, five years old. Bronchitis with pertussis.

February 23: Has had hard cough for a few days; has hemorrhage from both nose and mouth during the paroxysms; she also vomits all her food; breathing is roughened and laborious; does not sleep nights. I tried the ergot and bromide with poor results, and was obliged to treat the bronchitis more especially; after her attack of bronchitis was better, I commenced with the following on March 1:

R. Extractum ergotæ fluidum..... 8.
Syrupus tolutanum,
Aquea..... aa 45.

M. S. Teaspoonful every three hours.

March 3: Does not cough as often and the spells are not as severe; does not vomits her food, and she sleeps better nights.

March 7: Is improving slowly every day.

All my other cases have been similar to these, and I have met with similar success, and have come to the following conclusions: In cases of simple pertussis without complications, ergot does a great deal of good, both in relieving the cough and in shortening the duration of the disease, although in some instances the ergot is better borne if combined with potassium bromide. In all cases of pertussis where there are any complications ergot is not of benefit, and even after the complications are relieved, the ergot is not as beneficial as in simple pertussis.

GENERAL CORRESPONDENCE.

OUR CHICAGO LETTER.

March is a month of much interest to medical students in Chicago, inasmuch as the colleges hold their annual commencements during this month. There are a goodly number of colleges here, three regular or rather four, including the Woman's Medical College, two Homeopathic, and one Eclectic, making seven in all.

Rush leads with the largest number of students and the smallest number of professors, a fact which is much to the advantage of both parties concerned. Physicians and Surgeons and Chicago Medical are about equal as to students, although the former has been in existence but two years. Chicago Medical gives the longest course of instruction.

I recently saw Professor E. Andrews remove a tumor of the axilla, which from its relations to the large vessels and nerves in that region proved rather a formidable operation, though successfully performed. He was not able to remove the entire mass, but had to tie the base off with a double ligature. Dr.

Andrews does a considerable number of operations for cleft palate and when you come to take into account the fact that ether is the only anæsthetic allowed at his clinic, remembering its irritant effect on the mucous membrane of the air passages as well as the trouble in keeping the patient well under, since the anæsthetic has to be withheld at intervals so that the surgeon can work, you may easily imagine that the operation is long and tedious. The operation performed is essentially that of Sir William Fergusson and is followed by very good results.

The public health for the last month has been excellent, the number of deaths having been lower than for the same month of the four preceding years, notwithstanding the increase of population.

WM. L. AXFORD, M. D.

68 THIRTY-FIFTH STREET, CHICAGO, ILLINOIS.

CLINICAL LECTURES.

CASE AND ABSTRACT OF CLINICAL LECTURE ON TRACHOMA.

BY GEO. E. FROTHINGHAM, M. D..

Professor of Ophthalmic and Aural Surgery and Clinical Ophthalmology, in University of Michigan.

REPORTED BY M. A. G. CRAWFORD.

Simeon Smith, aged forty-five years, of Fremont, Steuben county, Indiana, entered hospital January 7, 1884.

History.—Seven years ago patient contracted inflammation of the eyes, from a freind, since which time his eyes have remained in that condition. The first symptoms were photophobia, and profuse purulent discharge, considerable swelling of lids rendering opening of them impossible. The eye-ball itself was congested and there were constant shooting pains through it continuing for several weeks. At this time his appetite failed and he did not regain it for about one year, since which time his general health has been as good as before. He has always had a purulent discharge from his eyes, since the first attack; but the pain subsided in about one year from its commencement and did not return until four weeks ago, when the sharp, shooting pains again returned, continuing until January 5, since which time they have been much less severe. The patient has not been able to read or hold his head erect for seven years.

Present Condition.—R. E., V.= $\frac{1}{200}$. L. E., V.= $\frac{7}{200}$. The sclerotic of right eye is vascular, and there is a marked opacity of the cornea, with a perforation at the outer part; the cornea is slightly prominent. The sclerotic of left eye is congested, there is an opacity of the cornea more marked in the upper half, with distinct vessels coursing through the opacity.

Treatment Instituted.—A five to ten grain solution of silver nitrate applied once a day; alternated with alum or glycerole of tannin.

January 19: Ulcer is filling up; apply hot cloths for five or ten minutes several times daily, with above treatment continued.

January 24: The patient is so much improved that he is allowed to go home, where he is to continue the treatment with daily applications of glycerole of tannin, and also frequent bathing of the eyes with a warm solution of salt and water.

March 12: Patient returned. All opacity except a slight epithelial one, has disappeared from the cornea; no trace of any blood-vessels thereon, nor is there any circumcorneal congestion. The anterior part of the eye-ball now presents a natural appearance, no photophobia, nor any considerable deformity of lids existing, but the patient holds his head erect and has very little of the appearance ordinarily presented by a person who has been so long afflicted with such a severe form of trachoma. An inspection of the cornea shows an entire disappearance of the trachomatous bodies, with a slight cicatricial degeneration of the conjunctiva in certain portions while a few spots present some slight vascular injection, with morbid relaxation. There is no gluing together of the edges of the lids nor a collection of pus at the inner canthus, nor is the patient discommoded by any unpleasant symptoms; but he returns in obedience to directions, and to show the results of the treatment.

Clinical Remarks.—This case is presented to you to-day to illustrate certain features of the disease known as trachoma and the effect of the treatment instituted. It is not our intention to-day to enter into any extensive discussion of trachoma, of its varieties and of its nature, or a general discussion as to the therapeutical management of such cases. A description of the usual varieties has already been given you and illustrated by cases in this clinic. Its treatment has also to a large extent been considered in connection with the different cases that have been presented. This case, however, is of particular interest as showing the value and efficiency of remedies that have been long known to the profession; and also as one of the most happy and speedy terminations of a severe form of this disease, in what may be justly regarded a permanent cure. I have already called your attention to the fact, that the chief object of curative treatment, is to set up a certain degree of irritation in the conjunctiva, with a view of producing an alterative effect upon its nutrition and leading to the absorption of the trachomatous bodies with the slightest possible degenerative changes in the membrane itself. Dense cicatrices and destruction of the secretory power of this membrane is a most unfortunate termination, leading too often to complete xeroph-

almia and destructive pannus. Still it should be remembered that some degree of cicatricial degeneration is unavoidable; indeed, it has been stated by one of our best observers, that all cases of trachoma, if cured at all, terminate ultimately in cicatricial degeneration of this membrane. When we remember how necessary to the preservation of the transparency of the cornea, is the existence of the softness and secretory power of this membrane; we shall see that any method of treatment which is calculated to increase the density of this cicatricial change or to obliterate the secretory glands, should be avoided. The natural tendency of the disease in some cases is sufficient to produce this disastrous result and the percentage of such terminations ought certainly, not to be increased by injudicious treatment. Excessive application of caustics and deep scarification of the conjunctiva, have both been noticed to be attended with this danger; so that in our selection of caustics and stimulating applications, we should avoid those calculated to produce deep destruction of tissue, or lead to excessive and uncontrollable inflammatory action. For this reason the use of the undiluted liquor potassæ once proposed and used for the destruction of these growths, has been condemned and rejected by all judicious practitioners—and so in the selection of other caustics we give preference to those that produce only the slightest caustic action, and yet produce the most stimulating and alterative effect. But while avoiding those which produce excessive action on the one hand, we should not fall into the other error of having our remedies too weak and inefficient. There is a great difference in individual cases as to the strength of application that is tolerated and this we have to learn by the study of each individual case, as we treat it from day to day; and we must determine at each time, what the application shall be, by the symptoms and appearance manifested; not by any routine of practice. There is no specific yet discovered which can be safely prescribed in all cases of this disease; but of the remedies that have so far been proposed, I consider Ag NO₃ in some form, the most universally applicable and beneficial in the treatment of this disease; having as it has, a mild, caustic action, it has a powerful chemical effect on the secretions and a stimulating and alterative effect upon the tissue. Moreover, what is a very important consideration, the reaction which it excites is easily controlled, so as not to work destructive injury upon the cornea or internal structures of the eye. The reaction is not of that severe character nor is it so rapid in development but that we may in almost all instances prevent injurious effects. Generally we shall find that a solution of the strength of five to ten grains of the crystals of Ag NO₃ to an ounce of water, will answer the purpose. This solution should be applied carefully to the conjunctiva, after it has been well-cleansed from adherent mucus or pus, and allowed to act from ten to thirty seconds;

when it should be carefully rinsed off with warm water and the lid restored to its former position. Some degree of smarting and irritation is excited and followed by a feeling of roughness which may continue for a considerable time, if the lid be not again everted and the coagulated mucus or pus removed by careful rinsing, or by rolling it up upon a camel's hair brush or some other appliance. This generally relieves all the feeling of discomfort that results from the application. If it does not, then a cold compress should be applied, and, after a half hour the lid should be again everted and the same method of cleansing be repeated. This will in almost all cases be sufficient; in fact, it will be seldom needed. If too prolonged pain or irritation follows the application, it is an indication that it is too strong and that milder measures must be resorted to. Frequent ablutions with weak solutions of common salt in water and the application of compresses wet in water will be needed for sometime before anything more stimulating can be applied. Sometimes cold compresses will be found most useful; at others, especially where there are indolent ulcers of the cornea, fomentations of warm water, will be found not only more soothing but most beneficial, and after the continuance of these applications for a short time and a resort to some counter-irritation perhaps, this extreme irritability of the eye will disappear and we may resort again with benefit to our astringents and mild caustics in the treatment of the case.

Not unfrequently we shall find it necessary to resort to much stronger solutions of the AgNO_3 to produce any curative effect on this disease: Twenty, thirty, and even forty grains to one ounce will often not only be well borne when properly applied, but will be found necessary to produce its curative action; nor will they be found to be attended with any more danger of producing dense cicatrization of the conjunctiva or internal inflammation of the eye, but greater watchfulness must be exercised to prevent excessive reaction; and their frequency must be determined by the extent of such reactions; generally twenty-four or forty-eight hours will be a proper interval. These applications should be continued while beneficial effects are observed, until the granulations are so far removed, that their complete removal may be left to milder remedies. I must not dismiss this case, however, without calling your attention to the fact that this case presents as rapid and as perfect a cure as is claimed by the most enthusiastic experimenters with jequirity in the treatment of this affection. I have on former occasions presented to you the claims of this remedy in treating this most obstinate disease. I did not neglect either, to caution you against its use, until its safety has been well demonstrated. While you should not reject, from prejudice, any new remedy that may be proposed by respectable authority or upon rational

grounds, you should remember that even the most brilliant names are not a sufficient endorsement to lead you to accept unhesitatingly the claims that are made for either new remedies or methods of treatment. Not many years ago the celebrated Liebricht, in a formal address, proposed a new method of operating for cataract, which he declared to be as easy as couching, as safe as modified linear extraction, and as perfect in its results as the flap operation. I need not remind you that none of these great advantages were ever established when put to a thorough and impartial test by the profession, and I believe it was soon abandoned by the author himself. So, although a man so celebrated as De Wecker, proposes this as a specific for this disease, claiming for it, that its action can be regulated by the number of applications and strength of solution used that: "Incontestably the cornea runs no risk during the course of jequiritic ophthalmia, and that incontestably jequiritic ophthalmia cures granulations rapidly," yet we are bound as prudent practitioners to accept with reserve these statements. The very enumeration of the symptoms produced is enough to convince us that De Wecker is in error. A remedy which in six hours will produce a severe form of conjunctivitis, which has in that short time invaded the surrounding tissue, producing such swelling of the lid as to prevent its being everted, and even raised sufficiently to inspect the cornea; with severe chemosis, high fever, nausea and loss of appetite, is sufficient, of itself, to show us that the cornea is in imminent danger, and may be destroyed before this severe inflammation can be controlled. Its purely local effect is so intense and dangerous that we should use it, only after the most extensive experiments upon animals have established the fact that these symptoms, when aroused by jequirity, are not attended by the same danger as when excited by other agents. But the more we learn of this agent, the more we learn that it is not exempt from these disastrous results. The last reliable report, I have received, of its effects, was in a private communication, it stated that in a recent case, where it was used by one of the most distinguished and successful oculists in this or any country, perforating ulcers were produced by it and it was for sometime feared that complete destruction of both eyes would result from its application. Nor is this the only danger as we may infer from the results of physiological experimentation with the drug. Cornil and Berlioz have recorded in a recent number of the *Archives de Physiologie* the result of experiments conducted by them, which show that its introduction into the system was sufficient to produce the death of the animals experimented upon by them. They showed these results were produced by a characteristic bacillus, which entering the system, either by absorption through the lymphatics or blood-vessels multiplied rapidly, have a tendency to deprive the blood globules of their oxygen

affecting the liver, kidney and other parenchymatous organs, even producing infarctus with necrosis of the hepatic cells. We can now see why so severe constitutional symptoms have been reported as among the effects from the use of this drug, and it should lead us to be slow in resorting to a drug, whose evil effects have not yet been thoroughly learned, especially when we have efficient remedies whose physiological actions have been well studied and whose injurious effects and lethal properties are better understood and more easily combated.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

CASE OF BRIGHT'S DISEASE OF THE KIDNEYS: DEATH: POST-MORTEM: REMARKS.

BY A. B. PALMER, M. D., LL. D.,
Professor of Practice and Pathology in the University of Michigan.

REPORTED BY W. E. SPICER.

M. H., aged twenty-four, occupation a common laborer, unmarried, entered hospital December 11, 1883.

History.—In September, 1883, after getting very wet, the patient took two or three drinks of liquor. Without removing his wet clothes, he laid down in a barn and went to sleep. On awakening, he had a severe chill, but did not notice any other bad results until the middle of October, when he had several attacks of severe convulsions. These paroxysms returned again in two weeks. His lower extremities have been somewhat cedematous but the swelling is more marked at times.

Present Condition.—Complexion is pale, anæmic and somewhat sallow. A pustular eruption is scattered over the face and head. He has lost some flesh but is not markedly emaciated. Feet and ankles considerably swollen and pitting; eyelids slightly cedematous. There is effusion of fluid just under the conjunctiva, giving the eyes a watery appearance. His sight is not as strong or clear as formerly. He is weak and has no disposition to walk about. Has a good development of brain but his mind is dull. He does not show ordinary interest in surrounding objects or occurrences. The amount of urine passed for eighteen hours, five hundred cubic centimeters. It has a specific gravity of 1010. Reaction acid; pale in color; odor normal; marked deficiency of urea; albumen abundant; it also contains pus, granular and hyaline casts.

The patient was examined by Professor A. B. Palmer, who

diagnosed Bright's disease of the kidneys and ordered that he be put on the following course of treatment.

R. Jalapæ..... 3ij.
Potassii bitartratis..... 3iv.

M. Sig. Sufficient amount to be taken every second day to procure a decided cathartic effect.

This diminished the œdema and produced alleviation of pain and confused feeling of the hands.

R. Hydrargyri bichloridi..... gr. j.
Syrupus glycyrrhizæ..... 3ij.

M. Sig. Take one teaspoonful every morning and night.

After the action of the former cathartic, if the bowels do not move more freely, a saline to be taken in the morning also:

R. Potassii iodidi..... gr. v.
Potassii bromidi..... gr. x.

M. Sig. To be taken as a dose three times a day.

December 26: Urine for twenty-four hours, seven hundred and fifty cubic centimeters; specific gravity 1010; acid; light color; cloudy; deficient in urea; pus in abundance; some blood; and hyaline and granular casts.

December 28: Tongue much coated and yellow.

R. Mass hydrargyri..... gr. vj.

Sig. To be taken at night followed in the morning by saline laxative.

Resume the former treatment after the cathartic.

January 8: Suspend former prescriptions and take:

R. Tincturæ ferri chloridi..... 3v.
Syrupi limonis..... 3ij.

M. Sig. Take one gram three times a day.

Patient had a severe hemorrhage from the nose, which occurred in the night, and shows marked weakness.

January 9: The tincture ferri chloride to be continued. Patient growing weaker.

January 17: Died.

Autopsy.—A postmortem examination was made in the anatomical amphitheatre in the presence of Professor Palmer and other physicians, and the medical class. The liver was found enlarged and congested, spleen somewhat congested, heart slightly enlarged and distended. The kidneys presented the greater amount of change, and were the principal object of interest. They were both enlarged and congested, but the right was larger than the left. The case had been comparatively acute, and sufficient time had not elapsed for the contraction of the organs which generally occurs in more protracted cases. The professor said there were three stages of anatomical change of the kidneys in Bright's disease. A stage of congestion, of exudation, and of retrogression. These kidneys were in the stage of congestion and exudation, but in neither kidney was the exudative process sufficiently advanced to exclude by pres-

sure the blood from the congested vessels so as to produce the *large white kidney*. The enlargement here is due partly to the hyperæmic condition and partly to the exudation. The glandular elements, the glomerules of the malpighian bodies are most affected showing to the naked eye the small red prominences here to be noticed. A microscopical examination would show that the tubuli, both straight and convoluted, are involved, that the epithelial cells are swollen, and that exudations have taken place into the tissues.

The intertubular interstices are doubtless infiltrated by lymphoid corpuscles, contributing to the enlargement. These accumulations are thought to be primary, and the alterations within the tubes secondary, but the latter change is early in the inflammatory process. Changes and accumulations of the epithelium and lymphoid materials in the tubes, when thrown off compose the casts, which were observed in the urine. In this diseased condition the albumen of the blood passes off with the urine freely, but urea is retained, poisoning the system and causing the convulsions and the nervous symptoms which occurred. Hyperplasia of the connective tissue occurred increasing the enlargement, and we have here well illustrated the appearance of the kidney in the combined stages of congestion and enlargement of these organs. Had the patient lived long enough, there would have occurred contraction of the adventitious tissue, and the kidney would have been smaller than natural and various degenerations would have occurred.

This case illustrates some of the causes, which produce this disease. In the majority, though by no means in all cases, alcohol plays an important part in causation. In many cases the long continued indulgence in alcoholics induce a slow form of the disease. I did not learn that this young man was an habitual hard drinker, at least, that he was far gone in intemperance, but at the time he slept in the barn, he had become intoxicated, his temperature was doubtless reduced by the alcohol, and sleeping in his wet clothes reduced it further, his kidneys were irritated by the poison, and this with the exposure brought on the inflammation with the results, clinical and anatomical, which we have witnessed.

Bright's disease is not generally dependent upon so obvious and acute a cause as the debauch and exposure in this case. It is usually produced by causes operating more slowly and repeatedly, and is often accompanied by slow degenerations of other organs than the kidneys.

While a large proportion of such cases like this more violent one, go on to a fatal termination, sooner or later, this is not always the case. I have in my mind several cases, where albumen and casts have appeared in the urine for a long time, and where some dropsical affections have occurred, but where the disease has been kept in abeyance for some years, and a few

cases when complete recovery has taken place under the long continued use of small doses of bichloride of mercury, combined with iodide of potassium; other remedies being from time to time resorted to as indications required.

This course of treatment was commenced upon in this case, but was without avail. The prognosis in these cases when the disease is established is always unfavorable, and I know of no treatment that could have arrested the disease in this case. The fatal result was much hastened by the free loss of blood, which occurred, but nothing could have prevented this termination. The lesson to be learned in this case, in all its aspects, is one of much interest and importance.

OPERATION FOR HARE-LIP ON CHILD FOUR MONTHS OLD:
PERFECT RESULT: REMARKS.

Infant son of J. W. E., aged four months, admitted to hospital March 26, 1884. The child has congenital hare-lip which has never been treated. He is bright, healthy, and well-nourished. The deformity consists of a single fissure on the right side. The course of the fissure is irregular and curved. Beginning near the angle of the mouth it passes up and in toward the septum, then curves outward around the right wing of the nose.

Operation.—The patient was brought before the class March 28, and examined by Professor Donald Maclean. Although peculiar on account of its irregular course, he regarded it a favorable case for operation. He remarked that ordinarily he opposed making any operation on a child so young, if the conditions requiring it were of such character that the operation could be delayed until the child became older and stronger. Young children do not bear very well any surgical manipulation that necessitates cutting. They very easily and rapidly sink from loss of blood. They suffer most profound shock from the least hæmorrhage. He regards hare-lip a very grave operation in young children, because they are poorly nourished and are generally small, weak and puny, especially is this true in double-hare-lip cases. In this case the deformity has not materially interfered with the child nursing successfully, and it is bright, thriving and well developed. With regard to the proper age for operating for hare-lip, no fixed rule can be laid down. In this, as in any other, there are many factors the effects of which must be considered separately and combined, before the operation is made. Here there is no element that particularly forbids the operation, only the general one that I have already mentioned; that children so young do not stand any cutting very well. I will also mention that the parents are both here and are very anxious to have the deformity removed. But the desire of parents and friends cannot be taken into any great consideration. There may be occasional times when their

wishes can be gratified. In this case I will allow it to have a little weight.

The child was placed under an anæsthetic. The edges of the fissure were then pared. In order to have them meet accurately, the tissues which attach the root of the lip and the wing of the nose to the superior maxilla were divided and dissected up from the bone. Three cat-gut ligatures were used to adjust the edges, which fitted quite evenly.

April 2: Patient shown to the class; the wound was completely healed; the sutures had been removed on March 31; the result was perfect; the edge of the lip was not the slightest notched and the deformity at the wing of the nose had entirely disappeared. Attention was called to the following points in the operation: No metallic substance of any kind was used to hold the edges; there were no projecting points of the hare-lip needle to catch the hand of the little patient and disturb the healing process; there was no unsightly mark caused by the figure of "8" suture, and there was no necessity to give an anæsthetic when the sutures were removed, a procedure that is usually necessary in the removal of the pin and metallic sutures, but the cat-gut threads were taken out by Dr. Heath, the house-surgeon, while the child was asleep.

EDITORIAL PERISCOPE.

THE "NEW" NEW YORK STATE MEDICAL ASSOCIATION.

The minutes of a convention held in the city of Albany on the 4th and 6th of February, 1884, at which the New York State Medical Association was organized, have been published. The radical change in the code of ethics in the Medical Society of the State of New York, created such dissention, that a number of the medical profession assembled to discuss what course could be taken by the adherents of the national code of ethics. The result of this conference was the organization of a new society.. From a careful canvass made by a council organized for that purpose, it was seen that out of a total of five thousand and two physicians, three thousand, eight hundred and sixty votes were recorded, of which number two thousand, five hundred and forty-seven were for the national code. From this it would seem that the "new code" party were greatly in the majority. By measures, which are not unknown to manipulators of such conventions, this minority controlled the annual convention last year and adopted a "new code," and this year were able to prevent the re-establishment of the national code of ethics.

This vast majority throughout the state, would not submit

to the ruling of the minority that controlled the convention. They would not consent to sever their professional association with their brethren without the state; nor were they willing "to have the great State of New York without a representation in the National Association, of which one of her most worthy sons is the honored President."

The provisions of the "new code" are very liberal, and allow consultations with all physicians who comply with the conditions of registration prescribed by the medical law of 1880. This is a virtual repudiation of the national code, and disfranchises the society of its affiliation with the American Medical Association.

The results of the canvass show that the majority of the profession do not wish to be placed in a position of disloyalty to the national code, and the only available way to avoid this was to organize a new association.

CONDITION OF THE URETHRA AND NEIGHBORING PARTS IN ACUTE GONORRHOEA.

It is such an unfrequent occurrence to have an opportunity to examine the effects on the mucous membrane of the urethra and the condition of associated organs, in acute specific inflammation of the urethra, that the description given by Professor Hamilton, is unusually interesting. While he was Pathologist in the Edinburgh Royal Infirmary, he fortunately procured the genital organs of a man suffering from acute and recent gonorrhœa. The *Edinburgh Medical Journal* of February contains these observations and remarks:

"The greater part of the urethra is lined by columnar epithelium. A small portion at the commencement and termination alone have a flat cell covering. . . . In acute gonorrhœa the process is an exaggeration of that which goes on normally. The deep layer of epithelium is unduly stimulated apparently by the action of the irritant applied. Its cells divide too quickly. Time is thus not afforded for the complete elaboration of the columnar cells, but an embryonic progeny is thrown off into the urethral lumen constituting the cells of the discharge. On looking at the epithelial surface it will be noticed how extensive the changes are within it. In place of the normal three strata of cells there is in some parts only one, in others a confused mass of rounded and pear-shaped embryonic bodies lies above this. The one stratum which is always present is the deepest of the three, or that which, when looked at from above in normal circumstances, has a squamous or endothelium-like appearance. It can be thus easily understood why the pus cells in the discharge from the urethra contain, as in bronchitis, only a limited number of columnar cells. These are not developed. The stimulation of the epithelial surface is too

great, and consequently those cells which should have gone on to form them are desquamated as soon as they are separated from the parent. The copiousness of the cellular products in the discharge can be easily accounted for when we consider that in most cases the greater part of the urethra is in the condition shown in the figure. The characteristic scalding pain on micturition is also well accounted for. The proper protective covering is destroyed and the urine in passing along the channel irritates the denuded surface. The mucous glands evidently participate in the disease, in so far as their secretion appears to be much exalted. Their secreting cells are converted into large, rounded transparent bodies from the accumulation of mucus within them. The gland channel is also filled with mucus and evidently distended. In the human urethra there is not the same elastic basement membrane as in the bronchi, hence, there is nothing to hinder inflammatory exudation in the mucous membrane from passing into the urethral lumen. The mucous membrane in gonorrhoea contains a considerable quantity of cellular effusion. The cells can be seen to be mainly limited to this particular locality, but long rows of similar cells extend thence into the substance of the corpus spongiosum, along channels lined by endothelium and evidently representing lymphatics. The slight cellular exudation into the fibrous spaces of the mucosa is similar to that seen in acute bronchitis, and I think it much more probable that, instead of the cells being forced out on the mucous surface, they are carried along the lymph current up towards the nearest lymphatic gland. The direction which the cells move into the tissue of the corpus spongiosum, points to the above as being the means by which the cellular effusion into the mucosa is removed. What the condition of the urethra is when the disease becomes chronic and a stricture results, I am unable to say. I think, however, that it is similar to what occurs so often in chronic bronchitis, namely, that the submucous tissue becomes cirrhotic and contracts upon the non-resisting lumen. Here, there being no fixed point, as in the case of the chest, to which this cirrhotic tissue might become attached, the invariable result of such a fibrous growth round the urethra is stenosis. Were the textures of the penis more rigid, there is no reason why a dilatation of the urethra—a true urethrectasy—should not result.

“The *testicles* showed appearances which were interesting as corroborative of the superficial and epithelial character of the morbid changes in the urethra. On looking at the contents of the tubes, evidences of catarrh similar to those of the urethra are distinctly visible. The layers of epithelium covering the membrana propria have been actively proliferating. The cells formed thereby have been thrown off in great numbers into the lumen tube, and have undergone fatty metamorphosis and

in some cases complete disintegration. A quantity of granular debris and minute oil-globules have thus resulted, partially occluding the tube.

"The epididymis showed similar catarrhal appearances, but evidently further advanced than in the tubes of the testis. The epithelium had desquamated in nearly every tube, and had become extremely fatty."

These researches are very interesting, as they show such a condition of the urethra which well accounts for the scalding along its tract during micturition and explains the extension of the inflammation along the lymphatics to the glands, and along the membrane of the tubes to the epididymis and testicle. It is clearly shown how strictures are formed by the extension of the inflammatory process to the submucous tissue, and the structure of the corpus spongiosum. The swelling of the testis and epididymis being due to the disease extending to these organs by continuity and not from metastasis.

FLAT-FOOT AND ITS TREATMENT BY OPERATION.

At a late meeting of the Medical Society of London a paper was read by Dr. Oyston, on the above subject, who, after emphasizing the fruitlessness of the ordinary and usual methods of treatment, discussed the causes of flat-foot, and the mechanism of its production. The appearances observed in it were held to be due to a falling down of the inner side of the plantar arch, and this was mainly owing to a yielding of the astragalo-scapoid joint in the sense of dorsal flexion. The deformity, in his experience, generally occurred in connection with rickets adolescentium. Of this evidence was found in rickety knottings of the bones, and other symptoms of rickets; as a rule, there had also been an amount of labor beyond the strength; in one boy, however, who was very fat, the flat-foot appeared at eight, without any other apparent cause. Pes valgus was a misleading term; the valgus was not a necessary part of the deformity. Valgus-ankle also was a different deformity; it was seen in young girls, and caused so much displacement at the ankle-joint that the malleoli struck each other in walking. In true flat-foot, on the other hand, the ankle-joint did not participate, but the arch of the foot became unfolded so as to touch the ground along the whole inner border. Examination of a foot in this condition might show relaxation of all joints, but especially, and in great degree, in the astragalo-scapoid joint. When deformity existed to only a slight degree, it might disappear at once on lifting the foot from the ground. A slight aching pain was complained of; and in such cases an error of diagnosis was very liable to occur, owing to the condition of flat-foot only being present when the foot was on the ground,

being overlooked in process of time. The deformity became permanent, and no longer disappeared when the weight of the body was taken off. Alteration in the shape of the bones finally occurred, so that, even by the use of force, the arch of the foot could not be restored. The relaxation of the astragalo-scapoid joint and the alteration in the bones were, he considered, the key of the deformity. As a secondary event deformity of the great toe occurred, and, in extreme cases, the form of the foot was so altered as to become "canoe-shaped" the calcaneum being so displaced, the posterior part being tilted upwards, that the heel could not be brought to the ground. The cure was arrived at by causing ankylosis at the astragalo-scapoid joint after it had been restored to position. Several methods, having this object in view, had been tried, but the best results had been obtained by the following operation: An incision was made on the inner border of the foot, parallel to the sole and over the joint; the joint was freely opened; the surfaces of the scaphoid and astragalus were denuded of their articular cartilage; the arch of the foot was restored to position, and the joint fixed by ivory pegs passing through the two bones. In some cases the patients had been able to walk in two months, but as bony union occurred slowly in persons liable to flat-foot, he considered three months' rest in stiff bandages necessary to insure bony ankylosis after the operation. In one patient only a little tenderness remained for some time, and, five months after the operation, one of the ivory pegs was extruded through a small painless sinus. The operation proved successful in seventeen cases performed on ten patients—the plantar was not generally completely cured, but all the patients, with the exception of the man in whom the peg was extruded, considered themselves, when seen at considerable intervals after operation, cured.

THE DIAGNOSTIC AND PROGNOSTIC VALUE OF THE TUBERCLE BACILLUS.

There are a few investigators who yet openly deny the existence of the tubercle bacilli of Koch, and a greater number who accept their existence, but who do not believe that they are pathognomonic of phthisis. It is now about two years since Koch published his discovery with accounts of cultivation, and production of tubercle bacillus by inoculating animals with the bacillus. Since then other competent observers have verified his results. It must then be regarded a factor of great value in the diagnosis of tuberculous disease. If with the negative or positive manifestations of the ordinary physical signs, there is respectively, the absence or presence of tubercular bacillus, the diagnosis must be greatly strengthened. It is evident that this organism is important from a diagnostic as well as from an etiological stand-point. To throw light on the

diagnostic and prognostic value Dr. Mackenzie, of Edinburgh, made one hundred and twenty-five examinations in seventy cases of disease, embracing examples of phthisis, empyema, chronic bronchitis, whooping-cough, croupous pneumonia, chronic catarrh, pleurisy, broncho-pneumonia, chronic pneumonia, pulmonary hæmorrhage, simple laryngitis, tubercular laryngitis, scrofulous disease of glands and bone, and tuberculous testis.

The points in regard to prognosis upon which stress has hitherto been laid are: (1) The number of the bacilli; (2) their arrangement; (3) their activity as regards multiplication. If the bacilli are numerous, massed together in bundles or "fagots," and if they show by a well marked beaded appearance a readiness to divide and multiply, the prognosis is regarded more unfavorable than when these organisms are few and isolated, and where they bear little appearance of division, for in the former case they are reported to indicate a more acute, in the latter a more chronic (fibroid) form of disease.

In Dr. Mackenzie's paper, the main questions considered are: (1) Is the bacillus of tubercle found in the sputum during the course of tuberculous disease only? (2) if so, have tubercle bacilli a prognostic as well as a diagnostic value, and what are the conditions which determine their number and their arrangement.

The results of these seventy cases are published in tabular form (*Edinburgh Medical Journal*) without being classified, but in his conclusion they are arranged into three classes: (1) Phthisical, thirty-seven; (2) non-phthisical, twenty-three; (3) doubtful, eleven. The phthisical cases are divided into the two great classes of acute and chronic. The acute embraces cases of rapid phthisis, or caseous pneumonia, with fever and progressive destruction of the lung substance. The chronic embraces those having fibroid changes in the lungs, with a small degree of fever, and occasional periods of absolute quiescence.

In the approximate estimate, the number of bacilli is indicated by the figures one to nine inclusive; one to three represent few; four to six abundant; and seven to nine very abundant. Applying this arbitrary numerical rule to both classes the following are the results: In twenty-five acute cases the total number of bacilli is represented by the number ninety-eight, average number 3.9. In nine chronic cases, the total number eleven, and average 1.2.

It is thus seen that the bacilli of acute tubercle are found three or four times more abundant than in the chronic varieties of the disease. The presence or absence of bacilli in the sputum in phthisis appears to be determined by (1) acuteness or chronicity of the disease; (2) condition of the lungs, especially in reference to the presence or absence of softening; (3)

degree of fever; (4) character of the sputum; (5) laryngeal complications.

Fibroid changes in the lungs are inimical to the development of the bacilli, and may even reduce the number found in the sputum. During the formation of cavities, when attended by profuse purulent or muco-purulent expectoration, bacilli are usually found in abundance. An intimate relationship exists between the number of bacilli and the process of excavation. They are met with long before the stage of softening, or even that of consolidation, and they exist as long as there exists a cavity with discharge. They are, however, neither so numerous, nor so generally distributed in incipient phthisis. It is not necessary for their implantation and growth, to have softening nor consolidation. Reaching the lungs by inhalation, Watson Cheyne believes they develop, in the first instance, in the epithelial cells lining an alveolus. He has shown that the bacilli are found not only in the caseous material, as met with in advanced phthisis, but also in the epithelioid alveolar cells of the early stage of the disease. The inflammation associated with their presence may be accounted for in either of two ways: it may precede and prepare the soil for their reception, or it may be the result of their irritation of the alveolar walls. Williams believes that before consolidation their number then correspond to the number of alveoli in which tubercular changes are proceeding. Watson Cheyne states that in large numbers they indicate either an affection of numerous alveoli or a large amount of caseous material. The statement that their presence in the sputum is evidence of excavation (West in *Lancet*, April 21, 1883) is not correct, however, the rapid formation of cavities favors their numerical increase.

The rise of the temperature which accompanies the presence of bacilli in the sputum may be very slight or only occasional, and in several of Dr. Mackenzie's cases there was no thermic rise, and in one case a positive increase of weight occurred while the numbers of bacilli appeared undiminished. It would seem that febrile disturbance is not an essential concomitant of the bacilli of tubercle, and though usually present in acute cases, in which the bacilli are generally most numerous, its degree affords no criterion as to the numerical strength of the organisms. This explains how tuberculization and excavation may take place without pyrexia, while the examination of the sputum tells the condition of the lungs. Dr. Mackenzie concludes that the thermometer cannot be relied upon to give early evidences of tuberculization, and that the careful examination of the sputum for bacilli is the earliest and safest guide to exactitude in diagnosis.

Tubercle bacilli usually abound in purulent or muco-purulent sputum, and may be present in purely mucous sputum if derived from the lungs. They are generally more abundant in

the morning sputum. The sputum of forced expectoration being mostly composed of saliva may not contain any of the organisms, but in that spontaneously ejected, especially in the morning, they may be readily detected. Gastric secretion or large quantities of blood conceal the true character of the sputum.

When the tubercular affection of the lungs is complicated by a similar condition of the larynx, bacilli seem to be most abundant. Removing directly from the larynx by means of a brush the pus or muco-pus, which more or less completely coats the larynx, is the most satisfactory method for determining whether the inflammation is or is not tubercular in character. No examination, laryngoscopic or otherwise, can be regarded as complete where this procedure is omitted. Post-mortem examinations in cases of laryngeal phthisis, show the secretion coating the larynx to be swarming with tubercle bacilli, and if negative results were found from the examination of ante-mortem secretion, they were due to insufficient dexterity in removing it from the larynx. In twenty-two non-phthisical cases examined by Dr. Mackenzie, the bacillus was absent. In the series of cases with sputa of unknown origin he had no difficulty in separating the phthisical from the non-tubercular. From these observations it is obvious that this organism is not found in non-tubercular disease. Williams estimates highly their value in differentiating syphilitic from tubercular disease of the lungs, chronic phthisis from chronic pleurisy, and in the diagnosis of simple chronic pneumonia with consolidation and marked crepitation, with or without a history of hemoptysis.

Dr. Mackenzie regards the examination of the sputum of doubtful cases, in which dyspepsia, emaciation, rigors, cough, and accelerated pulse, and other dubious signs are among the symptoms, of the greatest importance in regard to prognosis. From a careful analysis of his investigations the following conclusions were made: (1) The bacillus of tubercle is pathognomonic of tubercular disease; found in the sputum it indicates that active tubercular disease is in progress in the lungs, in the larynx or in both; (2) it is absent in non-phthisical disease, in some cases of chronic (fibroid) phthisis, and during quiescent stages of the disease; (3) it is found in greatest numbers in acute phthisis with fever, softening, and cavity formation, but it is also present in fair numbers before consolidation can be detected, especially if the larynx be affected, and it is thus useful in the diagnosis of incipient phthisis; (4) in a given case its numbers vary according to the nature and origin of the pulmonary secretion, and the period of the day at which it is expectorated, as also according to whether it is or is not free from extraneous matter in excess: gastric secretion, saliva or blood; (5) found in the laryngeal secretion on its direct remo-

val, it is a most valuable aid in the diagnosis of laryngeal tuberculosis; (6) in hæmorrhage from the lungs, the presence or absence of tubercle bacilli in the hæmorrhagic fluid has a most material influence on the prognosis; (7) negative results in important or dubious cases cannot be held as conclusive unless examinations by different methods have been made on at least three different occasions; (8) while its diagnostic value is thus of a very high standard, indicating the existence of tubercular disease, its prognostic value cannot be determined with accuracy, insomuch as it may be as abundant in a comparatively slow non-febrile case as it is in a more acute and febrile one.

VENTILATION.

A very able address was made on the subject of "Ventilation," by Dr. J. H. Kellogg, of Battle Creek, Michigan, before the Sanitary Convention at Ionia, Michigan, December 13, 1883. The subject was handled in a way that showed that the author of the paper has a practical familiarity with the subject. The *Sanitarian* of March contains the following special points:

(1) We need pure air in our houses to dilute or wash away the impure matters which we are constantly throwing off from skin and lungs. With every expiration we breathe from our lungs a cubic inch of carbonic acid, which acts as a poison if rebreathed, and we throw off at each breath a smaller quantity of worn-out organic matter, which, if rebreathed is *much more poisonous*, and often produces and helps along grave diseases, especially consumption. There must be a constant change of the air in our rooms to dilute, wash away, and get rid of this impure air, and to bring in pure air in place of it.

(2) It is fallacious to suppose that one or even two openings into a room from the out-door air are enough to carry away the foul air, and to secure good ventilation or that a ventilating shaft without heat will carry off the foul air.

(3) In order to carry away the foul air from a room, we must have a heated shaft opening into the outer air above and opening into the room below at the floor. So long as this shaft is kept heated there will be a constant flow of foul air outward into the open air. If not heated there will be no constant outward flow of the impure air, such as is necessary to secure good ventilation. Each room should have a separate shaft.

(4) To secure pure air to take place of the impure air withdrawn by the heated shafts, we may either bring in unwarmed air directly, from without, or very much better, we may bring in out-door air over the heated surface of radiators or over stoves. In the latter way injurious drafts are avoided, and the air is properly warmed before it reaches our lungs.

THE ACTION OF NITRO-GLYCERINE ON THE CIRCULATION.

In a paper read before the Medical Club of Buffalo (*Buffalo Medical and Surgical Journal*) on "Some Uses of Nitro-Glycerine," by Dr. Charles G. Stockton, the physiological actions of the drug upon the circulating system were summarized as follows: (1) it has a direct paralyzing effect upon the muscular coat of the blood-vessels, especially the capillaries, producing relaxation of these, widening of the area vasculosa, thereby directly lessening arterial tension; (2) while this action is peripheral, it undoubtedly is assisted by a similar accompanying center influence, from depression of the vaso-motor centers; (3) there is depression of the inhibitory powers of the pneumo-gastrics and, as a result, the heart beats more rapidly while respiration becomes slower, death ensuing from asphyxia. There is then from the influence of this agent, great vascular relaxation, with increase of heart action, the efforts of the heart arising, partly, from the capillary dilatation, the increased blood supply to those vessels making the heart labor to supply itself, and partly from the loss of the inhibitory function of the pneumo-gastrics. The effects are quite uniform and constant. The remedy has proven itself remarkably beneficial in angina pectoris, and has been administered with gratifying results in spasmodic asthma, bronchitis, sea-sickness, reflex-vomiting whooping-cough, migraine, epilepsy, the cold stage of intermittents and other affections.

CONDENSATIONS.

THE peculiar odor of *iodoform* is found to be well masked by the addition of *ottor of rose*, one minim to the drachm, or of the *essence of rose geranium*, three or four minims to the drachm.

THE *Annals of Anatomy and Surgery* has suspended publication. The editors, Drs. Pilcher and Fowler, are going to Europe. This will be a matter of regret to its many readers. The *Annals* was always replete with able and original articles, and occupied a very important place in the literature of medicine and science, in fact its place was one that no other journal in this country fills. In the circular announcing its suspension it is hinted that its publication may be resumed.

THE bill introduced in the House of Representatives at Washington for the publication of a national pharmacopœia is being favorably considered by the committee of ways and means, to which it was referred. "We again ask that all of our readers who approve the measure, shall lose no time in exerting their legitimate influence with members of Congress from their respective districts in favor of the early passage of the

bill" is the request made by the *Journal of the American Medical Association*, and is echoed by the editor of *THE PHYSICIAN AND SURGEON* that its readers may hear and act.

UNDER the head of "A Caution to Subscribers," the *New York Medical Journal* informs its subscribers that a swindler is going about the country soliciting subscriptions for various medical journals. His last operations were in Dayton, Ohio, where his victim was given a receipt signed "W. B. Taggart, for C. B. Slervin of Fort Wayne." The journal wishes it understood the person alluded to has no authority to solicit subscriptions for that journal. It is always well for persons before paying for any periodical to be sure that the solicitor is empowered by the publisher to receive subscriptions.

THE Farrand Training School for Nurses, Detroit, is another addition to the rapidly increasing number of these institutions. They are constantly growing in favor and popularity; and are being established in connection with all the large hospitals of the country. The profession appreciates the services of a well-trained nurse, one who is capable of receiving instruction, and has self-discipline enough to know how to obey orders. Carelessness and indifference in carrying out the directions given by a physician has baffled the skill of the most eminent, and thwarted the favorable termination of what would have been a successful course of treatment. These schools, by training nurses to understand what carefulness, attention and obedience means, are becoming a long needed auxiliary in medical education, and are proving to be of great value to the physician. There are now over twenty in the United States that are established and a number more that are being organized.

At a recent meeting of the Academie de Medicine, M. Sandras objected to treating bronchitis, laryngitis and colds, by entrusting therapeutic agents to the stomach and intestinal canal. The drug thus administered is absorbed, passes into the circulation, and reaches the organs requiring treatment after a very roundabout journey, even if it does not lose its way there. M. Sandras recommends that the laryngeal and pulmonary mucous membranes be acted upon by direct inhalation of the vapor of turpentine and tar. The necessary apparatus consists of a bottle with a cork presenting two orifices. An india-rubber tube is passed through one of the orifices with its end at a little distance above the level of the fluid in the bottle. Another tube is passed through the second orifice; this is in communication with the air, and is passed into the fluid. The bottle is half-filled with a mixture of chloroform, ether, and turpentine, or with one hundred grammes of turpentine poured on to twenty grammes of Norwegian tar. The inhalations should

take place three times per day, and be kept up for five minutes, at the rate of fifteen to twenty inspirations a minute. M. Sandras asserts that this treatment rarely fails to cure coughs, and all the unpleasant complications attending colds and bronchitis.

THE American Association for the Cure of Inebriates, through its secretary T. D. Crothers, M. D., of Hartford, Connecticut, desires the readers of *THE PHYSICIAN AND SURGEON* to answer fully the inquiries found printed below. This association was organized in 1878 for the "purpose of studying the nature and causes of inebriety from a purely scientific standpoint." The object of these inquiries is to collect of the physicians of the country their practical experience and observation. Those who contribute will have full credit for the report, and will receive a copy of the result of the investigation.

As this is for the very laudable and important object of obtaining a more accurate knowledge of the cause, form and nature of inebriety, it is hoped that careful answers will be promptly forwarded.

(1) Can you give any facts from observation, bearing on the heredity of inebriety; particularly as to the presence of insanity, epilepsy, phthisis, inebriety, or other neuroses in the parents or relatives of inebriates? Give cases with histories if possible.

(2) Can you give any history of inebriates whose drinking dated from or was influenced by head injuries, sunstroke, syphilis; or could be traced to mental shock, disease or injury of any kind; also to overwork, nervous exhaustion, anæmia, and any specific causes which broke down or injured the system?

(3) Have you seen any cases in which insanity or epilepsy either preceded or followed inebriety? If so, was it traced to the use of alcohol alone or was it due in part, or in whole, to some inherited or acquired diathesis?

(4) Have you noted any distinction between the different forms of inebriety, such as irregular, continuous, or periodical inebriety? State any facts you have noticed which relate to the periods and forms of drinking.

(5) What particular mental and physical changes have you noticed concerning the character and general health of the inebriate, that would suggest the idea of disease and the need of physical care and treatment?

(6) Have you noticed any form or condition of inebriety that seems to be produced or is largely influenced by the kind of alcoholic drink used, or the work engaged in, or the food or climate, or any other unsanitary surroundings?

Illustrative cases concerning any of these inquiries will be welcome, and a full expression of opinion from observation and experience is urgently requested.

NEW PUBLICATIONS.

PARRISH'S TREATISE ON PHARMACY. Fifth edition, enlarged and thoroughly revised by Thomas S. Wiegant, published by Henry C. Lea's Son & Co., Philadelphia.

This treatise on pharmacy by Edward Parrish, late Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy, is as indispensable to the dispensing or manufacturing druggist, and student of pharmacy as Dunglison's Medical Dictionary is to the doctor and the student of medicine. It has ceased being a literary luxury, and has become a bare necessity. The work is not merely a text-book for pharmacy students and druggists, but is a valuable guide and compend for the physician and medical student. Under the head of "method of writing prescriptions," very wholesome advice is given, and sharp criticism is made regarding the careless, and slovenly manner in which physicians write their prescriptions. Mistakes, which might be quite ludicrous, were it not for the very serious and fatal results following, arise from the neglect to distinctly mark, "for external use," all topical remedies. Caution is given about combining a number of medicines in a single prescription. Principles are laid down that will greatly aid the inexperienced; and valuable tables are arranged of those medicines best suited to the liquid form, of chemical and pharmaceutical incompatibles, of these preparations, which as a rule, should not be combined with other chemical substances.

The great advance made in chemical and pharmaceutical science, has made it necessary, in revising the fourth edition to expunge obsolete matter, re-write and re-arrange many of its chapters, and put in much new material. The new preparations appearing in the late revision of the United States Pharmacopœia have been introduced. Also the tests for chemical and official compounds adopted in the pharmacopœia, and its system of parts by weights in place of definite quantities have been added. The chemical section has been re-arranged. The inorganic substances are grouped according to their bonds, conforming with the advanced of inorganic chemistry. The general pharmaceutical and chemical processes are collected in a separate part. This compact arrangement greatly aids in the matter of reference, by having similar preparations classed together, and the description of the different processes and the apparatus needed, placed with the different classes. A syllabus for each kind of preparation, and each variety of medicine accompanies the chapter devoted to that subject, which in a concise tabulated manner gives the quantity and character of the substances and the method of preparation; and the name, origin, character, etc., the composition and properties, and the uses of each medi-

cinal substance. The work is divided into seven parts: (1) Furniture and implements of a laboratory; (2) history of pharmacopœias, weights, measure and specific gravity, etc.; (3) pharmaceutical processes and apparatus; (4) inorganic pharmaceutical chemistry; (5) pharmacy in its relations to organic chemistry; (6) galenical pharmacy; (7) extemporaneous pharmacy. The appendix contains a number of hints on the management of the sick chamber, giving directions about ventilation, cleanliness, change of posture, preservation of ice, change of linen and of room, etc. A list and the way to prepare articles of diet for the sick and convalescent. A list of medicines and preparations for a physician commencing practice in the country; the necessary instruments and implements. A large number of receipts for the more important popular medicines.

HANDY ATLAS OF THE WORLD. Ivison, Blakeman, Taylor & Co., New York and Chicago, 1884. Price, 50 cents.

This work issued on the 1st of February is one of the neatest, best and most accurate publications of its character. It is printed from new plates, most of which were prepared expressly for this work. It contains maps, showing the standard railway time of the United States; the most recent explorations in the polar regions and Central Africa; a commercial map of the United States; railway maps of the United States, and all principal countries of the world; special maps of the principal cities of the United States, and other valuable maps and important statistics. Send post-paid on receipt of price.

NUMBER VIII OF VOLUME III: MEMOIRS OF THE BOSTON SOCIETY OF NATURAL HISTORY: ON THE DEVELOPMENT OF *ŒCANTHUS NIVEUS* AND ITS PARASITE, *TETEAS*. THE FIRST WALKER PRIZE ESSAY OF THE SOCIETY FOR 1883. By Howard Ayers.

The investigations which gave the material for this essay were carried on under the direction of Dr. E. L. Mark, at the Museum of Comparative Zoölogy, at Harvard College, Cambridge, Massachusetts. By his investigation and in this thesis Mr. Ayers has endeavored to establish, in the origin and maturation of the ovum, and the origin and growth of the embryo; the following points: First for *œcanthus*. (1) The origin of the ovum in a germarium rather than from an ovarian epithelium; (2) the process of yolk formation, by cell degeneration instead of secretion; (3) the occurrence of a primitive segmentation of the embryo before the appearance of the permanent segments; (4) the existence of a pair of appendages (some of them rudimentary) on each of the seventeen segments of the body; (5) the origin of the dorsal vessels as a paired organ, the lateral halves of which fuse and give rise to a median tube in the same manner as in some of the worms, and the origin of the blood

corpuscles as nucleoli of endodermic cells; (6) the existence of embryonic gills; (7) the lack of any sharp distinction between a cell and its nucleus, and between a nucleus and its nucleolus; (8) the existence of segmental enlargements of the mesodermic somites, similar to those from which the nephridia of worms take their origin; (9) the origin and significance of the embryonic membranes among the insecta; (10) the origin and significance of the dorsal organ among the insecta. Second for teleas. (1) The absence of embryonic membranes; (2) the occurrence of a larval form intermediate between the blastosphere and the cyclops larva of Ganin.

THE ANALECTIC: A Monthly Periscopic Summary of the Progress of Medical Science, edited by Walter S. Wells, M. D., formerly editor of *Quarterly Epitome of Practical Medicine and Surgery* and *Epitome of Braithwaite's Retrospect*.

The object of the *Analectic* is to classify the immense number of items of practical importance that are to be found scattered through the current medical literature. Published by G. P. Putnam's Sons, New York.

MEDICAL DIGEST.

THE TREATMENT OF COUGH IN PHTHISIS.

In treating the cough in phthisis, Dr. Green (*Lancet*) says: "It is in the first place to be remembered that the complete expectoration of the phthysical sputum is all important, as its retention tends to cause infection of fresh portions of lung. Cough is therefore necessary, and, speaking generally, we may say that it should be interfered with by means of sedatives only with the object of procuring a sufficient amount of sleep, and cough sedatives are therefore admissible only during the night. I believe the old practice and one still perhaps too frequently indulged in, of giving sedative cough mixtures during the day, or of combining sedatives with the tonic medicine, is much to be deprecated, for such treatment tends not only to interfere with the stomach functions, but also, in many cases, injuriously to check the cough. The two-fold cause of the cough must also be borne in mind, the irritation caused by the diseased lung, and that caused by the pharynx and adjacent parts; for as pointed out by Dr. Lander Brunton, the removal of one of these sources of irritation is often sufficient to prevent the reflex act. This explains the well-known fact that mucilaginous substances combined with the sedative render it so much more efficacious. The mucilage not only lubricates and shields the pharyngeal mucous membrane, but insures the

local influence of the sedative. Practically, then, we may say that in attempting to control the cough in early phthisis, we should endeavor to influence the pharynx rather than the lung or the reflex center. Some such combination as the following will in most cases answer this purpose: Solution of hydrochlorate of morphia, spirit of chloroform, and ipecacuanha wine, of each three minims; oxymel squill, or syrup of tolu, twenty-minims; gum arabic mucilage, twenty minims; water one drachm. This, which should be swallowed slowly, may be taken if necessary three or four times during the night; but it should if possible be avoided during the day. Some demulcent drink or lozenger containing marshmallow, liquorice, etc., without opium, will usually serve sufficiently to restrain the day cough. A sedative inhalation the last thing at night, such as conium and chloroform, or a little opium, is another valuable mode of checking cough and procuring sleep, but is more frequently called for in the latter stages of the disease. Opium in medium doses, bromides, and other drugs which influence the respiratory center, are rarely necessary in early phthisis. The importance of promoting the early morning expectoration of the accumulated secretion by means of some warm drinks we have already alluded to.

THE TREATMENT OF PUERPERAL SEPTICÆMIA BY THE INTRA-UTERINE EMPLOYMENT OF IODOFORM.

Dr. William Gardner, in the *Canada Medical and Surgical Journal*, writes as follows: Iodoform, so valuable in the treatment of wounds, appears from recent experiments and experience to be equally valuable in the after-treatment of the puerperium: Dr. T. J. Alloway published, in the number of this journal for April last, the abstract of a paper read at a meeting of the Montreal Medico-Chirurgical Society a short time previous. Dr. Alloway's method of employment of the drug is in the form of suppository made with cocoa by pressure, and that they are introduced within the uterus by a stilette sponge tent introducer, Sim's speculum being used to expose the cervix uteri. Three cases successfully treated in this way are related. The temperature charts appended appear to indicate a very speedy result from the treatment. In the last number of the *Archiv. für Gynakologie*, appearing two or three months ago, is a paper, by Ehrendorfer, assistant at Professor Spath's clinic, in Vienna, on the same subject. The writer does not seem to be aware of what has been done in this treatment on this side of the water; at all events he makes no mention of the matter. His experiments were begun in November, 1881. He employs gum arabic, starch, and glycerine as the excipients for making the suppositories, and finds that the result is a more soluble suppository than one made of cocoa butter. The following is the

formula: Iodoform powder, twenty grams; gum arabic, starch, and glycerine, each two grams. Make into three suppositories of the length of about five or six centimeters. The suppositories are passed into the uterus by means of a forceps. Abstracts of the history of twenty-seven cases thus treated are appended. They were all complicated cases, cases in which experience shows the danger of septicæmia developing to be very great. Among them may be instanced forceps and version cases, craniotomy, decapitation, decomposing foetus, adherent placenta, retention of secundines after abortion, producing septic endometritis, etc. Of the twenty-seven cases three died. One of these was a case of placenta retained for many hours before its forcible removal under chloroform. The second was a face presentation with prolapse of the umbilical cord, a rupture of the cervix, extending, as the autopsy proved, into the peritoneal cavity and leading to suppuration. The third was delivered by craniotomy. It was a difficult operation, and led to several fissures and rents of cervix and vagina. Death occurred nearly six weeks afterward. At the autopsy suppuration of the vagina and necrosis of the symphysis pubis and right sacro-iliac synchondrosis were found. Both writers allude to the obvious advantages of this antiseptic over intra-uterine injections of carbolic water, etc. Those qualities of iodoform, whereby it adheres to wounds, its insolubility, and its quality of slow vaporization, whereby it continues to act for a long time, render it most valuable, inasmuch as it renders unnecessary the frequent irritating disturbance of the parts, unavoidable in treatment by intra-uterine injections.

THE TIME AND MANNER OF WEANING INFANTS.

In the report of the committee to examine essays sent to the Paris Academy of Medicine, for the prize offered by that body for the best paper on the subject of weaning, a concise summary of the most practical suggestions contained in the approved memoirs, was given as follows: Generally speaking, the child should be fed at the breast during at least the first year of life. The term weaning should be understood as indicating the time at which the child ceases to suckle and begins to be fed with other food than breast-milk. The weaning of an infant fed at the breast should be a progressive process, for too rapid weaning is often attended with fatal consequences. Gradual weaning is best accomplished by supplementing the mother's milk for cow's milk. This should be given in a bottle, as the effort of sucking excites glandular secretion, and if possible it should be withheld until the third or fourth month. After the sixth or seventh month a little farnia, oatmeal, starch or bread may be added to the animal milk to make a thin pap. At the end of a year egg and butter may be used and bonillon

may be substituted for milk in preparing the gruel. At the end of eighteen months or two years vegetables and fruits may be allowed, but meat and wine only after this time. The meals should be given at regular hours, twice a day to begin with and the intervals between the times of nursing should be increased at first during the night. When about to complete the process of weaning, it is important to choose: (1) A time at which the infant is in perfect health; (2) the interval of calm which separates two dental crises, as after the cutting of the third group or the first molar teeth, or after that of the fourth group or the canines; (3) a season of medium temperature as spring or fall, so as to avoid equally the great heat of summer and severe cold of winter.—*Obstetric Gazette*.

JEQUIRITY IN MIXED TRACHOMA.

Dr. E. P. Brewer, Norwich, Connecticut, contributes to the January number of the *Therapeutic Gazette*, a report of a case of trachoma which he successfully treated with jequirity, after five years of treatment by the best talent of the east, and after the regulation method had failed. He employed a one per cent. infusion of the bean, and with the results as indicated:

First day: Three applications were made by dropping the infusion into the eye and brushing the lids externally. By night the lids were slightly swollen, of a light purple hue, and felt heavy.

Second day: Three applications were made as yesterday; the palpebral oedema is considerably increased. The conjunctiva is injected and cedematous near the caruncula lach.; there is some discharge; photophobia is pronounced. At night the sleep was disturbed, and about midnight a slight chill was experienced.

Third day: Temperature 100°; pulse 90. Fine needle-like pains are occasionally felt; otherwise the sensations are as yesterday. The applications were made as usual. The upper lid is swollen out even with the supraorbital arch beyond the os frontis while the lower lid, though less inflamed, is puffed out beyond the malar prominence. The chemosis of the ocular conjunctiva is extensive and moderate in degree, being bathed with a profuse watery discharge in which float a few irregular, tenacious, deep yellow strings of mucus. The cornea is unaffected. At night the sleep was sound and refreshing.

Fourth day: The infusion is now discontinued after a total of ten applications. The disagreeable sensation of weight is much alleviated by frequent applications of tepid water. The general condition is unchanged, except, perhaps, slightly exaggerated. Temperature normal; pulse 72.

Fifth day: As yet no diphtheritic membrane has been seen;

the nearest approach being the floating threads. The swelling is subsiding. The discharge is still profuse.

Sixth day: Marked diminution of both the inflammation and discharge has characterized this day. The cornea is somewhat deeper in hue, but devoid of excoriation.

Eighth day: The granulations are mostly absent. Indeed, the last twenty-four hours has perceptibly reduced their number. The palpebral conjunctiva is intensely red and thickened, reminding one of plush velvet. The ocular conjunctiva is less vascular than before medication, and generally normal in appearance.

The progress of the disease is then described in detail up to the sixty-seventh day, when the following report is made: The cornea is still hazy, and one blood-vessel is visible in its substance. The discharge has entirely ceased. Some thickening of the lid remains, betraying footprints of the vanquished trachoma. The palpebral conjunctiva is smooth and vivid in appearance, daily losing the deep red hue. The ocular conjunctiva is normal in aspect, yet on slight exposure shows some evanescent injection. The condition of the eye is such that the doctor pronounces the case cured.

LONG ABSTINENCE IN TRANCE STATE.

Being interested in several cases recently published in the *Lancet*, of persons who apparently took no food for various periods while in a trance and other states, Dr. A. G. Bateman sends to the same journal accounts of other interesting cases. In the *Edinburgh Medical and Surgical Journal*, Number XIX, July, 1809, there is a notice of the case of Ann Moore, the celebrated Tutbury fasting girl. "In consequence of the great and increasing difficulty in swallowing, this girl limited herself to small daily portions of bread, and on March 17, 1807, relinquished even this, allowing herself only occasionally a little tea and water, and in September following abstained altogether from liquids and solids." Mr. Granger who reported the case, mentions on seeing her two years afterwards her mental faculties were perfect, but that she was extremely emaciated. Doubt being cast upon the case, a committee was appointed, and strict watch being kept, when, after ten day's abstinence the patient gave in, and her mother confessed that she has given her tea and water occasionally. It seemed, however, clearly to be established that no solids were ever taken. In the *Philosophical Transactions*, says Goode, "there is an account of four men who lived upon water alone for twenty-four days, being entombed whilst excavating." He also mentions another case where "a young man at the age of sixteen took a sudden dislike to all food, and for eighteen years has tasted nothing but water. Imposture being suspected, he was shut up and closely

watched for three weeks, during which time nothing was given him but water, and this test he successfully came through. He uniformly enjoyed good health, and appears to have had ejections, but seldom." Eva Flagen, according to Hildanus (reported by Goode amongst his cases), fasted for sixteen years, taking neither liquids or solids. Jenet McLeod (case reported by Dr. MacDonald in the *Philosophical Transactions* 1777) was at the time thirty-three years of age, unmarried, and from the age of fifteen had had various paroxysms of epilepsy, which rendered the elevator muscles of the eyelids paralytic, so that she could see only by lifting the eyelids open with her fingers, and entirely produced tetanic closure of the mouth. Her lower limbs were retracted toward her body. She lost all desire to eat or drink. After an abstinence of many months she made signs of wishing to drink some water, after taking about a pint, relapsed into her former state, taking nothing for four years up to the time of the report. In this case certificates were added to the testimony as to the "truth of the facts," and adduced by the medical attendant, by the minister of the parish, sheriff, deputy and various justices of the peace. In many cases fraud has been conclusively proved, but in a great many water has really been the sole nourishment. Goode, after examining various theories, which were supposed to explain the value of water in nutrition: summarizes thus wisely: "Let us then rather confess our ignorance than attempt to be wise upon the basis of conceit. All that we do know is that bodies of every kind are reducible to a few elementary principles, which appear to be unchanged, and are certainly invisible. Air, therefore, and water, or either separately, may contain the rudimental materials of all the rest. Plants suspended in the air grow and diffuse odors; insects are sustained by the same source; worms, fishes, and occasionally man himself, are supported by one or the other, or by both. We are not yet acquainted with the nature of these elementary principles, from which every compound proceeds, and to which every thing is reducible."

BROMOFORM: A NEW ANÆSTHETIC.

The *Medical Record* contains this summary of Dr. Horroch's report, recently made to the Society of Physicians of Vienna, of the results of his experiments with bromoform.

The drug, discovered by Lowig in 1832, is prepared by the addition of an alkali to the hydrate of bromal. It has a pungent, aromatic, ethereal odor, and a sweetish taste. It is oily, colorless, is soluble in warm water and ether; and boils at 151° centigrade. In the experiments referred to, it was found that anæsthesia was easily produced by inhalation; the stage of excitement was short and of a mild form. Animals did not vomit after coming out of this condition, and appeared well.

Hypodermic injections of one gramme of bromoform produced in large animals complete narcosis, lasting for an hour, during which time the temperature fell from 2° to 4° centigrade. The internal administration of bromoform in doses of, from one to one and a half grammes, produced sleep of several hours' duration in dogs, rabbits and cats. Reflex excitability was entirely abolished, and irritation of the sciatic nerve failed to effect any changes in the blood pressure. The peripheral ends of the vagus retained their irritability; the pulse remained about its usual frequency, but blood pressure was diminished, and the bodily temperature was also reduced. From experiments made at the surgical clinic it was found an efficient and rapid anæsthetic, both in adults and in children. It was milder in its effects than chloroform, for which it appears to provide a substitute, but it is likely that it will supersede sulphuric ether.

EUCALYPTUS IN THE TREATMENT OF ACUTE TONSILLITIS.

For some time past I have been using eucalyptus in cases of quinsy, and with very gratifying results. Dilute one drachm of the fluid extract with one ounce of warm water, and use as a gargle or spray every twenty minutes. The water must be as warm as the patient can bear it. It has been my good fortune to see all the cases so treated recover speedily, without suppuration. No other remedy was used except in one instance, I presented quinine. It has occurred to me that owing to its antiseptic properties and its spinal action on the respiratory tract, eucalyptus would be an excellent local application in diphtheria, either used as above or to medicate vapor for inhalation.—H. G. Houston, M. D., in *Atlantic Journal of Medicine*.

SUCCESSFUL TREATMENT OF SCIATICA BY GALVANISM.

Reporting in the *Lancet* four cases of neuralgia of the sciatic nerve successfully treated by galvanism, Dr. W. E. Steavenson, of Saint Bartholomew's Hospital, says:

In the first case the patient had been afflicted with rheumatism for ten years. After the sciatic attack came on, most of the usual remedies for treating the disease were used for three months. Galvanism was then used. The patient was allowed to lie on his bed and only the back of the right leg uncovered. A wet pad of metal and amadou connected with the positive pole of a Coxeter's constant current battery was placed on the abdomen and held in position by the patient; and a carbon disc electrode covered with chamois leather connected with the negative pole was moved gently up and down over the course of the great sciatic nerve. The skin was previously moistened with warm salt water, as were also both electrodes. The nega-

tive pole was used over the nerve as it possesses a greater caustic effect than the positive. Twelve cells were as many as the patient could bear without giving him severe pain. That number was therefore not exceeded, and the application lasted for about ten minutes. This treatment was begun March 3, 1882. On April 2, the patient was discharged well. The second case, a member of the staff of the hospital, was seized with pain in the lower part of the back, on June 25. The patient has suffered from a previous attack of sciatica about three years before, which lasted several months. The slightest twisting or bending of the body at the hip, cause great pain. The most acute pain was limited, to what from position appeared to be the lumbosacral cord. First application of galvanism made June 28. The electrodes and administration much the same as the first case. The application was continued for eight minutes. At first ten cells were used, and then increased up to sixteen, and again reduced to twelve before the conclusion of the *séance*. The application was followed by marked improvement, which lasted more or less for the rest of the day. For the first two hours the relief experienced agreeably surprised both patient and operator. At the end of ten days from the commencement of the attack the patient was well again, the former visitation having lasted ten weeks. The third case a man sixty-two years of age, was treated simultaneously with the second, when seen June 26, there was great tenderness over the right sciatic nerve; he was scarcely able to walk on account of the pain. He was galvanized three successive days in a bath at a temperature of 100°. The positive electrode was left hanging in the water, but not in contact with the body, and the negative electrode applied to the course of the great sciatic nerve. Twenty-two cells had to be used to influence the patient.

June 29: Much better.

July 2: More pain, not having been galvanized since June 29. Eight days later put in salt water bath, forty cells used. The salt and water conducted the electricity entirely away from the patient, was placed in bed and treated in same manner as described in preceding cases. In ten days discharged well. The fourth case had suffered ten months from pain down the course of the right sciatic nerve. He also suffered some from lumbago and complained of great pain, seizing him at times about the region of the right sacro-iliac synchondrosis. He was galvanized six times, and felt much better, but presented himself later and expressed himself as not materially improved. This patient being the only one of the four who did not feel decidedly better from the first application. On the second occasion twenty-two cells were used. The patient was a fat man and therefore offered more resistance to the passage of the current than the other cases. In thirteen days pain was all gone. In these four cases galvanism was used with marked benefit.

The number of cells used varied in the different cases. The application lasted at each *séance* for eight to ten minutes, and the integument over which the electrode had passed was suffused with a bright blush, the patient experiencing a glowing feeling of warmth in the same track. The stiffness of the muscles was also relieved, and the patient was able to bend down, and get up from a sitting position with very great ease for several hours.

ALTERNATE HOT AND COLD APPLICATIONS IN INTERNAL STRANGULATION.

The following is taken by the *Practitioner* from *Lyon Medical*:

A man, forty-two years of age, who had some years previously suffered from a severe attack of peritonitis, was suddenly seized with violent colic. There was meteorism; the abdomen was generally tender on palpation, but more especially at a point a little to the right of the umbilicus. There was no passage, either of fecal matter or of gas from the bowels, and purgatives, whether administered by the mouth or by the rectum, brought no relief. The obstruction of the bowels continued for several days, despite an active and varied treatment, stercoraceous vomiting set in, and the patient was rapidly sinking. At this time, all other measures having been tried in vain, Dr. Row determined to try the effect of the alternate application of heat and cold to the abdomen. An ice-bladder was first applied and retained for an hour, then it was removed and compresses as hot as could be borne were placed over the abdomen. These applications were continued every hour through the day and night. In the evening some gas escaped from the bowels, and the following morning there was a slight stool. A mild purgative was now given, and was soon followed by a copious evacuation, and the patient speedily recovered.

COUGHS.

It is sometimes forgotten that *coughs* properly so-called and in their integrity, are convulsions, expurgatory efforts intended to eject from the air-cells and passages of the lungs or from the wind pipe or larynx, either secretions or exudations, or occasionally foreign substances, which impede the act of respiration. Unfortunately there is seldom any constant relation between the frequency and force of a cough and the physical need of it. This is because, the act being, of course, performed by virtue of a special excitation of the nervous system, and the degree of excitability of the nerves concerned in the production of the muscular contractions producing the cough determines its force and frequency, instead of their being governed, as they

ought to be solely by the exigencies of expulsion. Moreover, owing to the sympathetic connection of nerves enervating different groups of muscles and in relation with different centres, cough may be produced by excitations, which are not local to the breathing organs. Therefore we find that *cough*, which ought to be a simple process or function of a remedial, or, at least, physically helpful kind, is, in fact, itself a cause of disturbance, and disease by reason of its excessive and disorderly character. Very grave mistakes are made in practice by treating cough as a pulmonary affection and in itself morbid. It is in a very large proportion extrapulmonary in its cause, and it is only morbid in itself when there is no disease or disturbance in the lung, which can create a need for expulsive efforts. Cough is always a nervously induced phenomenon, and as such it ought to be treated with the utmost carefulness so as to ascertain its cause, its *raison d'être*, and the proportional relation which subsists between need and effort where need really exists. Without clear views on these various aspects of the question of cough in each particular case, it cannot be intelligently treated.—*Lancet*.

BROMIDE OF POTASSIUM IN DIABETES MELLITUS.

The influence of the sceptre which the so-called "diabetic centre," has so long swayed over the domain of diabetic pathology is, perhaps, destined ere long to be felt less acutely, or even at all. It is certain at all events, that the majority of pathologists are by no means satisfied with the opinion that diabetes is essentially due to a lesion of the parts of the central nervous system about the medulla oblongata. In 1866 Begbie, probably influenced by the prevailing news of the nervous origin of diabetes, suggested the employment of bromide of potassium in that disease. He obtained satisfactory results in four cases. Since that time many physicians have employed the drug with varying success. Last year M. Felizet presented to the Académie de Médecine a work entitled, "The Cure of Diabetes Mellitus and Glycosuria by Bromide of Potassium," and now we have the report of the commission appointed to inquire into that paper. From a therapeutical point of view the numerous theories of diabetes may be divided into three classes, according to the report. The alimentary, hepatic and nervous theories are the names adopted. Each of these hypotheses has had its own therapeutics. M. Felizet believes that he can cure diabetes with bromide of potassium. His belief is based on the results of clinical and experimental researches. Glycosuria induced by puncturing the floor of the fourth ventricle of rabbits, ceases sooner under the administration of bromide than when left alone.—*Lancet*.

MISCELLANEOUS ITEMS.

THERE are about two thousand four hundred female physicians in the United States.

THE veterinary department of the University of Pennsylvania has been fully organized. The course of study will extend over three years.

A PIECE of land in the suburbs of Washington has been purchased at a cost of \$32,500 for the erection of the Garfield Memorial Hospital.

VIENNA has twelve hundred medical students this winter. For the first time in the history of the city, there is a scarcity of dissecting material.

DR. W. H. HOTCHKISS has resigned the chair of demonstrator of anatomy in Yale Medical College. Dr. C. Bundy Lindsey has been appointed to fill the vacancy.

THE emperor of Brazil has given Professor Lucerda \$20,000 for his discovery of permanganate of potassium hypodermically injected as an antidote for the venom of the cobra.

THE Illinois board of health, during 1883, granted five hundred and fifty-three licenses to practice, refused one hundred and sixty-three applications and revoked eleven licenses.

BUBO of chancroid is recommended by Dr. Keyes (*Medical Annals*) to be treated for the sake of aborting it, by applying with a camel's hair brush equal parts of tincture of aconite root and tincture of belladonna several times a day.

To disguise the taste of tincture of iron, Dr. Hauer recommends that tincture of the sesquichloride of iron be mixed with simple syrup and then with milk. This mixture will not affect the teeth, nor will the styptic taste be apparent.

CUT chaff as a filling for mattresses is used by Taunier in the Maternité Hospital. After every individual accouchement the chaff is burnt. Instead of the rubber cloth, paper saturated with pitch is used. This also serves for one accouchement only.

DR. WELLARD PARKER is eighty-three years old, Alonzo Clark, eighty; A. C. Post, seventy-seven; Isaac E. Taylor, Austin Flint, seventy-one, and Frank H. Hamilton, seventy. Some of these distinguished medical men are still in active practice, notwithstanding their great age.—*Cincinnati Lancet and Clinic*.

THE next session of the American Public Health Association will be held in Saint Louis.

THE *Louisville Medical News* says: "A German merchant, a few days ago, received a telegram from Damietta. Noticing that it had been detained twenty-four hours, he made inquiries, when he was told that the telegram came from a cholera-stricken district, and they were compelled to disinfect it according to the regulations of the authorities.

THE following will be found a most elegant mode of administering salicylic acid in the treatment of acute rheumatism:

R. Sodæ salicyl.....	℥ss.
Syr. limonis.....	℥j.
Aquæ cinnam.....	℥viij.

M. Sig. A teaspoonful every four hours.

EUPHORBIA PILULIFERA IN ASTHMA.—Dr. C. C. Baker, of New Mexico, reports in the *Therapeutic Gazette*, for January 1884, his use of euphorbia pilulifera in two cases of asthma. The results in both were remarkably prompt and satisfactory, and point very clearly to this latter addition to the list of anti-asthmatics as one which should receive a thorough trial at the hands of the profession.

A MISSOURI root doctor makes use of three medicines, namely: hibobalorum, lobobahirum and hilobustem. The first is a cathartic, the second an enemetic and the third a "rank pisen," which will bust a patient wide open. He makes the cathartic by peeling the bark downward, the enemetic by peeling the bark upward, and the "pisen" by peeling from side to side.—*Medical World*.

THE New York Post Graduate Medical School has been so successful that it will soon move to a new building which will enable it to give hospital advantages to its matriculates. The new building is very large, being five stories high, and having a front of ninety-five feet. The new announcement gives a list of one hundred and forty physicians who were matriculates for the year ending November 1, 1883.

THE *Medical Herald*, September, 1883, says: "If people drank less tea and ate less confections and pastry, taking instead raw onions, fresh meat, and plain vegetables, the neuroses would be lessened both in frequency of occurrence and severity of type. The so-called strumous diathesis would become more rare, and there can be little doubt a general increase in physical and mental developments would be observed among our people.

In the *Archives of Ophthalmology*, Zimmerman reports the case of a previously healthy family, who moved into a house in a low situation, close to a sewer. The children were attacked with intermittent fever and night-blindness. The fever yielded to quinine, but the visual defect persisted until removal to a healthy locality, when it vanished, and did not return.

NOVEL TREATMENT OF ASTHMA.—Dr. R. B. Faulkner of Alleghany, Pennsylvania, has had remarkable success in the treatment of spasmodic asthma, by applying tincture of iodine as a counter-irritant along the course of the pneumogastric nerve. The application is made daily until the surface below is irritated. The novel part of the treatment consists in inflating the lungs forcibly at the time of a full inspiration by means of a Politzer bag. This distension of the vesicles puts an end to the spasm. —*New York Medical Record*.

DURING the performance of a thrilling play in Norwalk, Connecticut, recently a well known physician of the town who seldom entered a theatre, was among the audience. When the part came where the heroine swallowed the poison, is dying and her lover and friends are wringing their hands and crying helplessly, "what can be done," the doctor was seen to be laboring under considerable excitement. At last the terrible scene was too much for him, and, forgetting where he was, he jumped to his feet and shouted, "Give her coffee, you fools; give her coffee."

THE *New England Medical Monthly* says: "Hay feverites will be interested to know that Sydney Smith was also a sneezer. In a letter written in 1835 he says: 'I am suffering from my old complaint, hay fever, as it is called. My fear is perishing by deliquescence; I melt away in nasal and lachrymal profluvia. The membrane is so irritable that light, dust, contradiction, an absurd remark, the sight of a dissenter, anything, sets me sneezing; and, if I begin sneezing at 12, I don't leave off till 2 o'clock, and am heard distinctly in Taunton, when the wind sets that way, a distance of six miles.'"

AT Croton, New York (*Gaillard's Medical Journal*) common drugs are sold at all the stores. Recently an Irishwoman entered one of them and said to a new clerk: "Would yees be afther putting me up a pound of Queen Anne's powders?" The clerk took down a package of Royal Baking Powder and was doing it up when she exclaimed: "Not at all, at all, me Patrick is sick with the African favur." "The what fever?" inquired the clerk. "The favur nagur," replied the woman. "An' yeess should see poor Patrick shake. He hasn't a tooth left." The woman got the quinine which she wanted.

THE following novel method of tooth drawing is taken from the *Dental Register*. A small square of Indian-rubber, pierced with a central hole, is pushed over the tooth until the upper part of the root is reached. The rubber gradually contracts without causing any pain. Four or five days complete the operation, while very slight bleeding and slight swelling of the gum, are the only inconveniences. This procedure is recommended by a dentist of Geneva.

TO EXAMINE THE THROAT.—Bring the patient near a good light of any kind, and after the mouth has been opened, place on the tongue a depressor, then request the patient to yawn. The larynx will immediately rise up, and every part necessary to be seen will be brought fully into view. The nose should be held as this compels breathing through the mouth. Thus the velum pendulum palati is raised, the anterior and posterior pillars become widened, exposing the back of the pharynx. The tongue must be pressed downward very gently as it always resists harsh treatment.—Dr. Thomas Dimock in *Therapeutic Gazette*.

CIMICIFUGA IN EPILEPTIFORM NIGHT-MARE.—Dr. Ed. M. Small, of Eastport, Maine, sends us the report of a case occurring in his practice almost identical with one published recently in these columns in the report of Professor H. C. Wood's clinic. The disease was the epileptiform night-mare, and it was cured in Dr. Small's case by half a teaspoonful of powdered cimicifuga racemosa being administered at bed time. The paroxysms at once ceased, and there had been no return in a lengthy period of observation. He also was ordered to partake of only a light supper each night, and to avoid excitement as much as possible.—*Medical Times*.

SOME remarks are made on the absorption and intoxication of iodoform by Mr. P. J. Hayes, who reports a case in the *Dublin Journal of Medical Science*. In mild cases there is anorexia, headache, loss of memory, moroseness or even delirium; pulse accelerated and temperature elevated. In grave cases, hallucinations or furious delirium, urine scanty, temperature perhaps 104°; and in fatal cases, death in a state of coma. He thinks "that few surgeons will be found to oppose the recommendation of Martin and Veliaminoff, that iodoform should in all cases where its use is indicated, be applied in small quantities; that special caution should attend its use where much adipose tissue is exposed, and where the wound is extensive; that its employment is more or less contra-indicated by advanced age, tendency to fatty degenerations, diseased condition of heart or lungs, and where there exists a susceptible condition of the nervous centres."

THE PHYSICIAN AND SURGEON

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DEVOTED TO MEDICAL AND SURGICAL SCIENCE.

VOLUME VI.

MAY, 1884.

NUMBER V.

ORIGINAL ARTICLES.

HYOSCYAMINE IN PUERPERAL INSANITY.

BY A. J. BURDENO, M. D., WAYNE, MICHIGAN,
Assistant Physician at Wayne County House and Asylum.

Miss J. R., a Pole, age twenty-three, was admitted to the lying-in ward of the Wayne county house on October 2, 1883. Upon admission, my attention was called to her, and upon questioning I found, so far as could be ascertained, that none of the diseases of pregnancy existed, not even constipation which is so frequent an occurrence in pregnancy.

The patient was a large, well developed, well nourished person, and no more attention was given her until the evening of November 27, when, upon being summoned to the ward, I found her in the first stage of labor. Presentation, breech; labor, somewhat rapid; and she was delivered of a very ill-nourished child weighing but five pounds and six ounces. Nothing unusual occurred during the first five days following parturition. But from this time the secretions gradually diminished, the lochial discharge, became somewhat arrested, and the bowels constipated.

On the evening of December 5, as I was making my rounds through the hospital wards, my attention was called to this patient. She was sitting in bed holding her babe in her arms apparently well and as happy as any one could be. At about 10 P. M., I was summoned to the ward in great haste. Upon arriving at her room, to my utmost astonishment, I found her

bed drawn out into the middle of the floor with five or six exhausted women vainly endeavoring to restrain her. Her face much flushed, skin hot and dry, pulse rapid, she was talking incoherently and at times screaming at the top of her voice and endeavoring to strike every one within her reach. Considering it too arduous a task to hold her in bed until she could be brought under the influence of a sedative, I immediately proceeded to bring her under the influence of an anæsthetic, chloroform being used. At the same time I dispatched a messenger to the asylum in the adjoining grounds for a solution of hyoscyamine and administered one-twentieth of a grain hypodermically, keeping the patient under the influence of the anæsthetic for twenty minutes after its administration. When the patient recovered from the anæsthetic she was fully under the influence of the hyoscyamine. To my satisfaction, she remained quiet, and shortly drowsed off into an apparently refreshing sleep. I left her at 11:30 directing that applications of cold be made to her head and that I be called if she became restless or violent. However, I was not called, and upon visiting the ward in the morning I found her quiet and much refreshed. Thinking I might be mistaken, I gave her nothing, supposing that when the effect of the hyoscyamine passed off, if my diagnosis be correct she would once more become violent. On the afternoon of the same day she became affected as on the previous evening, and I again administered the anæsthetic and the hyoscyamine. I also gave three drops of oleum tigllii with the result of a thorough evacuation of the bowels and a restoration of the lochial discharge. I then gave the following:

R. Potassii bromidi,
Sodi bromidi..... ʒʒ ʒ v.
Chloralis hydratis..... ʒ jv.
Aquæ camphoræ..... ʒ jv.

M. Sig. Take a teaspoonful three times a day in a large drink of water,
and

R. Spiritus ætheris nitrosi..... ʒ ij.
Potassii acetatis..... ʒ iij.
Ext. jalorandi fluidum ʒ j.
Aquæ puræ..... q. s. ad. ʒ jv.

M. Sig. Take a teaspoonful well diluted at 10 A. M., and 3 P. M.

The bowels were kept open by salines, sodii sulphatis being used principally. This treatment was continued with the addition of a hypodermic injection of one-twentieth of a grain of hyoscyamine morning and evening. The patient improved rapidly and showed but slight symptoms of her insanity and these occurring only toward morning and evening as the influence of the hyoscyamine wore away. On December 12 I was called away being detained twenty four hours, the patient receiving the same treatment excepting the hyoscyamine. On the afternoon of the 13th of December she became again violent,

and manifested all the signs and symptoms of the first attack excepting profuse perspiration being substituted for the hot dry skin. On my return I again resorted to chloroform and hyoscyamine as on the two previous occasions. I continued the hyoscyamine, gradually diminishing the dose until one-fortieth of a grain was administered.

On December 28, she was removed from the lying-in ward to the general hospital, somewhat emaciated and demented. At the same time the elixir phosphate of iron, quinia and strychnia were substituted for the diuretics. From this time she improved rapidly, and on January 25, 1884, she was discharged from the hospital cured.

FOUR COMMON DISEASES OF THE SKIN SUCCESSFULLY TREATED.

BY E. J. SHERRILL, M. D., NEW YORK, CITY, NEW YORK.

The cases reported were witnessed at the Dewitt Dispensary, New York, through the kindness of Dr. Geo. T. Jackson, 14 East Thirty-first Street.

ERYTHEMA MULTIFORME.

*Definition.**—An acute inflammatory disease characterized by reddish, more or less variegated, macules, papules, and tubercles, occurring discretely or in patches of various size and shape.

The following case, a foreigner undergoing acclimatization, emphasized the fact that the disease frequently attends marked dietary changes.

Wm. M., an Englishman, age thirty-two, attendant, landed in January. Five weeks later he had the first attack of the disease. The eruption was proceeded and attended by slight itching. In a few days it disappeared. A second slight attack also of its own accord disappeared. This, the last attack, is most severe of all. The eruption is general. There is in turn itching, and in several places wheals of the size of the palm of the hand are seen. The most marked change in the patient's diet consists in his taking meat three times a day. In England he was accustomed to take it but once a day.

Treatment.—Return to former diet. The acetate of potash internally.

OSORIOSIS.

Definition.—A chronic disease of the skin, characterized by reddish, dry, inflammatory, more or less thickened patches, variable as to size, shape, and number, covered with abundant whitish or grayish matter, of pearl colored, imbricated scales.

Guta O., age twenty-five years, servant. Health uniformly good (something noticed in nearly all patients with this

*The definitions are from Duhring's Manual.

skin disease). The eruption has appeared at intervals during the past ten years upon the extensor surfaces of the forearms and legs. As it now exists it is in a typical and readily recognized form, the patches vary in size from a three cent piece to a twenty-five cent piece, and are covered with the imbricated scales.

Treatment.—Chrysarobin pigment. R. Chrysarobin, one drachm; acid salicylic, one drachm; liquor gutta-percha, one ounce. M. Apply to patches with stiff brush.

The applications of the pigment are made by the physician himself, as much better results are obtained than when made by patients. Two applications each week, for three weeks, upon the patches caused them to fade very much. Serious eye complications are liable to follow the use of chrysarobin upon the face and scalp.

HERPES FACIALIS.

Definition.—An acute inflammatory affection consisting of one or of several groups of vesicles occurring for the most part upon the face and genitals.

Henry D., age five years. Has had recurrent attacks of the eruption every spring. April 5 was sick at his stomach. Two days later the present eruption appeared, preceded by slight itching. One small patch is seen just below the left eye a larger one (one inch by one and a half inches) upon the left cheek.

Treatment.—Lassar's ointment. R. Zinci oxidi, two drachms; amyli, two drachms; petroloti, one ounce. M. S. Apply to it daily.

ZOSTER.

This name, and not Herpes Zoster, is now applied to the eruption of groups of vesicles situated on the trunk, unilateral, so that when well developed the groups of vesicles extend from the anterior to the posterior median line, and attended with neuralgic pain.

Maria C., age fifteen years, saleswoman. Health delicate. Eruption preceded by no unusual symptoms. There was considerable pain in the affected parts two days before the formation of the vesicles. The eruption appeared above the scapula, in the axilla, and upon the right breast, in the form of scattering groups of vesicles. Movement of the arm is attended with such pain that the patient dressed with difficulty.

Treatment.—Lassar's ointment as in proceeding case.

ECZEMA INFANTILE.

Not to give the definition of eczema it may be explained that this name is applied to the disease as it appears in varying forms, usually upon the head and face, and sometimes also upon the trunk of infants. During the last two months not less than twelve patients with this form of eczema have come to the dispensary. In each instance the disease was traced to improper feeding.

The treatment uniformly adopted was as follows: Mothers instructed to feed at proper intervals, depending upon the age of the infant. The crusts and scales to be carefully removed by washing with soap and water, after which cleansing, washing is to be suspended until notified. Following the washing and drying these preparations are applied. For the scalp, oil cade., two drachms; olive oil, one ounce. M. S. Apply to it daily. For the face and trunk, Lassar's ointment, above given, with ten grains of salicylic acid, added if necessary, to allay intense itching. Mothers are instructed to make a mask for the face and scalp to retain ointment, and to tie the hands of the children if necessary to prevent scratching. The ointment must be continuously in contact with the diseased surfaces. At the end of a week marked improvement will be noticed. Three weeks are sufficient to effect a cure in ordinary cases well cared for.

PLUMBISM.

BY GEORGE H. CLEVELAND, M. D., LANSING, MICHIGAN.

I noticed in the April number of *THE PHYSICIAN AND SURGEON*, a description of an interesting case of lead-poisoning from the pen of Dana C. Lewis, M. D., and its perusal recalls to my mind the facts of a case recently occurring in my experience.

Though in the case which I present there was not the degree of constipation Dr. Lewis met with, yet I am led to describe it with a view to showing the necessity of immediate and energetic treatment in subjects of profound susceptibility.

It is denied that pure metallic lead, *per se*, has any poisonous effect, but by oxidation and the formation of salts which are poisonous, the system can, and commonly does, become influenced by an absorption of these salts. We are also told that "*acute* poisoning with lead is not common, nor are any of the lead salts actively poisonous. The acetate, or sugar of lead, is popularly believed to be a virulent poison, but it is by no means so. There are very few fatal cases on record even from swallowing quantities amounting to an ounce of the acetate or its equivalent. The symptoms are in main those of irritant poisoning, the chief difference being that constipation is the rule and diarrhoea the exception." From this it will be seen that it is only the chronic variety that need demand our attention.

We sometimes find plumbism in lead-miners, metallurgists, plumbers, solderers, type-founders, and compositors. Lead is also often introduced into the system by means of contaminated drinking water, generally due to the passage of the water through lead pipes. The contamination of water under these circumstances is, however, facilitated by the admittance of air, and by the presence of certain salts.

We are better acquainted with, however, and most commonly meet, lead poisoning in persons handling the ordinary carbonate or white lead, painters, glaziers, and plumbers, principally. I dare say that could we examine a large number of persons doing inside work in painting, glazing, etc., we would discover a pretty large percentage suffering from the saturnine cachexia in the different degrees of severity, and possibly assuming modified forms, depending upon individual susceptibility, surroundings, and the length of time exposed. But to the case.

Charles S., aged about twenty-five years; married and has family; habits, temperate. Was called about 10 P. M., March 23, and found this man complaining of intense colic, occupying a circumscribed area of two or three inches in the umbilical region. Upon questioning and investigation I concluded this trouble was of the saturnine variety and that for the present I could only give relief. Gave him five pills of morphia sulphate, one-eighth grain, with directions to take one every two hours until relieved of pain. As he was able the next day to call at my office, I made a careful examination of his case.

History.—This man is a painter, and has been doing inside work for the past nine months (was a painter, however, some little time before this, but engaged upon outside work principally). During the last nine months he has had constantly increasing pain in the umbilical region, constipated bowels, poor appetite, and has been losing flesh. His skin is of a dull pale appearance, gums red and retracted, and presenting the characteristic dark line; teeth very bad, breath foul, and the sense of taste perverted in a peculiar manner which he could not describe; some dyspnœa and precordial oppression with occasional palpitation; stomach irritable, frequent headaches, and bladder quite irritable. There was also slight symptoms of approaching paralysis of the extensors of forearm. There being no doubt about the diagnosis, I at once advised a thorough course of eliminative treatment with tonics, and a removal of the cause. Prescribed

R. Potassii iodidi.....	20	|	00.
Elixir simplici.....	120	|	00.

Misce. Signa. One teaspoonful at 9 A. M., 3 and 9 P. M., daily.
also

R. Magnesii sulphatis.....	30	|	00.
Acidi sulphurici, diluti.....	4	|	00.
Aquæ.....	120	|	00.

Misce. Signa. One tablespoonful in water every morning.

Advised simple diet, and rest with moderate exercise. A week later my patient was doing nicely, and upon referring to my record I find that I ordered a continuance of the same medicine, excepting that I added five grammes of potassium iodide to the first perscription and fifteen grammes of magnesium sul-

phate to the second one. Two weeks after beginning treatment he was working daily, and gaining strength and flesh. Pain had all disappeared and appetite was improving. He thought he would soon be as well as ever. At this time I prescribed

R. Potassii iodidi,
Extracti stillingiae, fluidi..... āā 20 | 00.
Elixir simplici..... q. s. 120 | 00.
Misce. Signa. One-half (½) teaspoonful before dinner and supper.
also

R. Magnesii sulphatis..... 30 | 00.
Acidi sulphurici, diluti..... 4 | 00.
Aqua..... 120 | 00.
Misce. Signa. One teaspoonful in water each morning.

It will be seen that the quantity of the potassium iodide was decreased, both in the prescription and in frequency of taking. The magnesium sulphate was also decreased materially as the constipation was entirely disappearing. The latest reports are of the most favorable character, and I can safely state that there is no further danger. I shall continue a mild treatment for some time.

REPORT OF AUTOPSY IN ELEVEN RECENT CASES.

BY WM. F. HAKE, M. D., GRAND RAPIDS, MICHIGAN.

I.—January 26, 1884. Miss E. R., age seventeen, native of Holland. Marked antero-posterior curvature of spine. Had the appearance of one twice her age. Died suddenly with symptoms of heart disease. Postmortem examination showed displacement of heart, lungs, and abdominal viscera, due to the deformity. Fatty degeneration of the heart, verified by microscopical examination. This condition is rarely found in one so young.

II.—February 17, 1884. Mr. J. W., age sixty years. Died after a single day's illness. Autopsy showed distension of bladder containing one and one-half quarts of urine; enlargement of prostate, involving and almost surrounding the neck of the bladder; double inguinal hernia with hydrocele of scrotum; small intestines inflamed; kidneys enlarged and congested; right kidney contained pus. Liver pale, shrunken and friable; spleen enlarged. This case is remarkable for the severe lesions existing in a man in apparently good health until the day of his death.

III.—February 18, 1884. Mr. B. J., Hollander, age fifty-five years. Died suddenly. Examination showed membranes and

surface of brain highly congested. Ventricles of brain completely distended with blood, containing probably six or seven ounces. Apoplexy.

IV.—February 18, 1884. Mr. J. R., native of Poland. Had a very slight fall with a sudden jerk to his head, but not falling on his head. Examination showed neck broken. Shows how readily the neck may be broken.

V.—February 27. Mrs. G., age thirty-two. Taken sick on February 25 and first seen on February 26, A. M. She had symptoms of internal hæmorrhage, but I was not able to determine in what locality. Complained of slight pain in back. Upon inquiry and examination I found her pregnant and in about the eighth month. She had worked very hard on the day before being taken sick and about twelve hours previous to the attack had been frightened by alarm of fire in the block where she resided. Remedies indicated were prescribed but without a favorable result. Examination showed hæmorrhage into uterus. Clot of blood weighed four pounds. Child was a male and well developed.

VI.—March 10, 1884. Mr. G., husband of case five. Had long suffered from ascites and enlargement of heart. He was very much jaundiced. Another physician and myself after careful examination diagnosed serious disease of the liver. A week before his death I made a careful examination of his urine and found everything normal except excess of urates. Upon postmortem examination we found enlargement of the heart; very slight enlargement of the liver, and some obstruction of the bile; and to our utmost surprise, we found both kidneys almost completely destroyed. Very little of either kidney was left excepting the capsule. They were each much shrunk and consisted of large pockets. This case had been treated by a number of physicians and no one had ever made an accurate diagnosis. Several physicians were present at the autopsy, and each said he had never seen such complete destruction of the kidney. This case, more than ever, convinced me of the difficulty, and liability to error, the physician meets in attempting a diagnosis.

VII.—March 30, 1884. Infant child of Miss M. Dropped into a vault. Male child of full term. Question to be decided, Was the child alive when born? Postmortem examination showed that the child had taken a full inspiration as the lungs were completely expanded.

VIII.—March 31, 1884. Reverend S. B., age seventy-six. Was thrown from a carriage, striking upon his head, killing

him instantly. Upon examination I found fracture of odontoid process just below articular surface for transverse ligament. A rare fracture.

IX.—March 31, 1884. Mr. D. M., middle-aged man. Was hit over left parietal eminence fracturing both inner and outer tables.

External wound measured one and one-quarter inches each way. Postmortem examination made five weeks after receipt of injury. Patient had been trephined four weeks before the examination. Removed vertex. Membranes around wound quite firmly attached. Inner table of parietal bone at one point had a portion of depressed fracture still attached which was continually causing pressure on the brain. Vessels of brain were highly congested. Section of right half showed large quantity of serum in ventricles. An abscess was found in left cerebral hemisphere which was well defined by a thick surrounding membrane. The cavity was about the size of a hen's egg and was one-half inch below the surface of the brain under the seat of injury.

X.—April 3, 1884.—Mr. J. N. F. Suicide. Examination revealed course of two balls. One entered skull just above right ear, passed through brain coming out on left side at a point nearly corresponding to place of entrance. The other bullet entered left side just below the nipple between the fifth and sixth ribs. Its course was downward, backward, and toward the right side, passing through apex of the heart, the diaphragm, entering the left lobe of liver, passing through and coming out at the right lobe, penetrating the ninth rib and lodging in its substance. The person had used two revolvers, one in each hand. As either wound of itself was fatal the question arose at the inquest whether they were fired simultaneously or consecutively, and if the latter, which shot was prior in regard to time. I made the statement that both shots may have been fired at same time, or that he could have shot himself first in the side, and then in the head, as it is probable that if the first shot had been in the head he would have become unconscious and could not have fired the second.

XI.—April 12, 1884. Mr. H. W. Suicide by hanging. Died by strangulation. Found discharge upon his left leg of pantaloons. Cut out a portion of the clots stained and examined it microscopically and found it to be spermatic fluid containing spermatozoa in abundance. In several cases of death from strangulation that I have examined I have found that an emission has occurred in each case.

GENERAL CORRESPONDENCE.

LETTER FROM ASIA.

MR. EDITOR: Perhaps the readers of *THE PHYSICIAN AND SURGEON* might be interested in a brief account of a disease which prevails here at the present time. I doubt if a true type of the disease is ever seen in the United States. I refer to the dengue, break bone or dandy fever of the books, but by the people of Syria called Abu-rikab, meaning in the Arabic "Father of Knees." I am told by the old physicians here that it usually prevails immediately after a cholera epidemic, and seldom if ever at other times. Why it is thus associated or connected with epidemics of that disease no one seems to know, not even those who have seen most of it, pretend to explain the connection. All agree as to the fact, and are evidently correct in believing that it is highly infectious, if not a contagious disease. Out of ninety thousand people in this city, fifty thousand, it is said, have had it this fall. Fortunately the prognosis is favorable; it is rarely fatal. I have been able to learn of only a few deaths attributed to it, from among all the large number of cases here.

It is an exanthematous febrile disease. There is a prodromic period, lasting from one to three days, which is characterized by a feeling of malaise. The symptoms which then follow are quite uniform and in order as follows: (1) A rise of temperature of from two to five degrees, seldom accompanied with a rigor; (2) during the fever, and sometimes preceding it, the patient complains of severe cephalalgia, of general muscular pains and soreness, and especially of pain referred to the eyeballs, greatly increased by rotation of the eyes; (3) about the fourth day of the fever a diffuse rash appears upon the skin very much resembling the rash in scarlatina. The fever subsides upon the appearance of the rash. The eruption is of short duration, disappearing in twenty-four or forty-eight hours. The patient is then convalescent, The rash is not followed by desquamation and there is at no time any inflammation of mucous surfaces as in most eruptive fevers.

Relapses, which are said to be common in epidemics of this disease in the United States and elsewhere, have only occasionally occurred in the epidemic which now prevails in Syria. Convalescence, however, is slow; the patient complains for weeks of debility and muscular soreness. This, and the fact that relapses do occur sometimes, led me to examine the blood of several patients, thinking that there might be some such bacteria present in the blood, as are known to exist in that fluid in relapsing fever. The blood of several patients was examined under eleven hundred and twenty-two hundred

diameters, but nothing of any notice was found. The red corpuscles presented a very crenated appearance, but as this may be due to a variety of innocent causes, the results of the examinations were practically negative.

Whatever new facts, concerning the cause or pathology of denque that may be observed here will be furnished the readers of your journal. Sincerely, C. F. DIGHT, M. D.

BEIRUT, SYRIA, ASIA, JANUARY 28, 1884.

OUR CHICAGO LETTER.

April has been a very dull and unpleasant month here in Chicago, with but little of interest in medical matters.

Dr. Randell, one of our graduates of the year 1878, has recently been appointed to the staff of Cook County Hospital. He did his first abdominal section a few days ago, for a large suppurating cyst which had an opening externally near the umbilicus. The peritoneum was not open at the end at all as the tumor was adherent to the abdominal walls for the entire extent of the incision. A fleshy mass and considerable hair was removed and free drainage established, as the tumor which proved to be a dermoid cyst, was everywhere adherent and did not admit of removal. The woman is doing well.

Dr. Fenger, who is one of our very best surgeons, and undoubtedly the best pathologist in the Northwest, has recently entered an abscess cavity in the lung, using Paquelin's cautery. He first made an incision down to the pleura and then passed a needle into the cavity of the abscess which was found to contain fetid pus. The cautery, at a cherry heat, was then shoved along the side of the needle and the cavity thus opened and drained. I think that Dr. Fenger has almost as much affection for the cautery as Professor Maclean used to show when I was a student at Ann Arbor. Certainly both obtain excellent results from its use, although I was always skeptical when told that it did not hurt.

WM. L. AXFORD, M. D.

68 THIRTY-SIXTH STREET.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The annual meeting of the State Board of Health was held at its office in Lansing, April 8, 1884.

The members present were President Avery, Drs. Lyster, Hazlewood, Vaughan, Tyler, and Secretary Baker.

Reports of the sanitary condition of the Wayne county poor house and asylum, and of the Barry county jail were made by the committees who examined these institutions; and these reports were ordered printed.

Dr. Vaughan read a paper prepared by Dr. C. P. Pengra, which gave results of investigations relative to the purification of water by freezing. As a result of a series of elaborate experiments conducted in the University laboratory, Dr. Pengra found that contrary to the general impression, freezing does not render water pure. Ordinarily he found less infusoria and bacteria in ice than in the water from which it was frozen, but the ice contained them in numbers sufficient to preclude its use. In harvesting ice the greatest care should be taken to get it from a pure source. This valuable paper will be published in the report of the board.

The secretary presented a summary compiled from lists of medical practitioners, registered under the new law. The number of counties in the state is eighty; from seventy-six of which reports have been received. The number of registrations returned is three thousand two hundred and eighty-five, but in some cases physicians are registered in two or more counties. The number reported to have graduated is two thousand three hundred and fifty-one; those who had attended some college but had not graduated, two hundred and eight; those who had attended no college, seven hundred and twenty-six. The number, belonging to all schools, reported as having graduated is seventy-two per cent of the whole number; the non-graduated collegiates are six per cent., and the non-collegiates are twenty-two per cent. of the whole number. The "graduates" are from all classes of medical colleges, hospitals, medical societies, etc. The number of different "schools" of medicine reported in these sworn statements is about seventy-five, including "Cureopathic," "Indian," etc. In at least one instance it is reported that the sworn statement had to be signed by a "mark," the practitioner being unable to write even his own name. The number registered as belonging to the four most prominent schools of medicine are as follows: Regular, one thousand, five hundred and thirty-three; homeopathic, four hundred and ninety; allopathic, three hundred and ninety-eight; eclectic, three hundred and sixty-six. The proportion of graduates to practitioners is: Regular, eighty-seven per cent.; homeopathic, seventy-four per cent.; allopathic, eighty-one per cent.; eclectic, forty-seven per cent. (Of all schools, as above stated, the per cent. is seventy-two).

It was decided to print the names and addresses of the health officers in Michigan as soon as full returns are received. The number in the State is nearly one thousand and four hundred. A new edition of the document on the prevention and restriction of scarlet fever was ordered, the last edition of thirty thousand copies being nearly exhausted. It was also decided to publish facts relative to several outbreaks of trichiniasis in Michigan.

The following resolutions were unanimously adopted:

Resolved, That this Michigan State Board of Health respectfully and earnestly memorializes Congress to pass the bill, introduced into the House of Representatives, January 8, 1884, by the Honorable Casey Young, or of some similar bill, providing for the prevention of the introduction of infectious diseases into the United States, and for procuring information relating to climatic and other conditions affecting the public health.

Resolved, That we consider the National Board of Health the best existing and the proper agency to carry on the work mentioned in the preceding resolution.

The Board discussed the merits of several text-books on physiology and hygiene with special reference to the effects of alcohol on the human system, and approved for use in the schools: Martin's "Human Body," briefer course, second edition, containing special chapter on alcohol and other narcotics; and Dr. Eli F. Brown's "Alcohol: Its effects on the Body and Mind."

The amount of office work during the quarter has been large and has included: The perfecting of arrangements for holding a Sanitary Convention at Hillsdale; preparation of the proceedings of the Ionia Sanitary Convention for the printer; the making of a compilation of the public health laws of Michigan; proof-reading on ninety-six pages of the Annual Report; issuing blanks for the return of the new health officers in each city, village, and township in Michigan; issuing the regular weekly bulletins of meteorology, and of sickness in Michigan; the correspondence of the office (postals are not usually copied), covering seven hundred and fifty pages of letter-copying book, of which over one hundred and fifty pages have direct reference to the prevention and restriction of communicable diseases in Michigan; and the regular computations of data relating to meteorology and sickness.

ORIGINAL TRANSLATIONS.

Translations from French Journals for THE PHYSICIAN AND SURGEON.
BY F. B. FLORENTINE, M. D., SAGINAW CITY, MICHIGAN.

MÉNOXÉNE.

Dr. Rouxeau, of Nantes, reported, in the *Gazette Médicale* of Nantes, a case of a young girl, aged seventeen, who never lost a drop of blood by the natural passages, but since four or five months, she is regular to a fixed day, and lasting three or four days, the discharge taking place through the left nipple.—*L'Union Médicale du Canada*.

OF THE ETIOLOGY AND PROPHYLAXIS OF PUERPERAL DISEASES.

BY DR. J. COMBY, PARIS, FRANCE.

We are too often disarmed against the grave manifestations of infectious puerperism; the most distinguished authors, who have devoted themselves to the study of puerperal diseases the larger portion of their lives, are the first to recognize it. This avowal of impuissance would naturally serve to discourage us, if we did not know that it is often easier to prevent a disease than to cure it. In regard to puerperal diseases, in particular, at present nearly all practical interest is fixed to its etiology and prophylaxis. In a recent book, that recapitulates a long hospital and private practice, Dr. F. Siredey, physician to the hospital Lariboisière, does not satisfy himself to describe and collect, in a logical concatenation, based upon facts, all the clinical modalities of puerperal infection, but he insists with care upon the filiation of accidents, their causes, their pathogeny, and arrives in this manner in formulating prophylactic rules already approved by numerous successes. We cannot do better than to borrow from a physician, whose authority is so well known in this matter, the hygienic precepts that he so eloquently proclaimed. No doubt the situation is not the same as it was at the period when puerperal fever made so many victims; great progress was realized in the hygiene of lying-in women, and epidemic puerperism will probably exist no more. But it is nevertheless necessary to recapitulate the principles and methods that have permitted to reach such a precious result. All affections formerly described under the generic term of *puerperal fever* are drawn nearer together by their common origin and their point of departure in the uterine wound. The puerperæ must therefore be considered as *wounded*, exposed subsequently to all the complications peculiar to *wounds*, on the other part, in the existence of the *infection*. All the efforts of the physician should be directed to this end: protect the wound from infection. Whence came this infection? Its causes, its origin are multiples and incongruous as its effects. In short, there is no perfectly definite unique germ, a *microbe puerperal* that would be agent to this *puerperal fever*, described by the ancients. As all those who have been operated on, the puerpera may receive lesions more or less different in nature and gravity. If we bear in mind this idea, we will no more, hereafter, be astonished at the diversity of manifestations of puerperism, and therefore we will no longer share in the error with those who admit the existence of a *morbid entity*.

Puerperal fever, it is well to repeat, does not exist as morbid entity. If the nature itself of the infectious principle can be connected to divers origin, the entrance door, according to

M. Siredey, is always the same. Repelling, with much reason, the *auto-infection* of the puerpera, M. Siredey professes the exclusive doctrine, (but prolific in practical results) of *hetero-infection*. Puerperal diseases can, most of the time, be conjured by protecting the wound from germs, which are the point of departure of the infection. We will not insist upon the hygiene of pregnancy, as the danger really only commences at the moment of the expulsion of the fœtus. From that time it is well to abstain from unnecessary explorations, and not to repeat the vaginal touch unless absolutely necessary. All operations of *compliance*, application of the forceps, or version, destined to accelerate labor, is absolutely proscribed, save in urgent cases. We should equally avoid any incisions of the vulva, or abrasions that serve to open a new way for the infection. The ancient *accoucheurs* paid too little attention to these traumatisms. The wound of the external genital organs plays, in effect, a part almost as important as the uterine wounds in the etiology of the infection. But, above all, it is at the moment of delivery that we should be most careful. Whenever the forceps are applied, or version made, the membranes as yet, protects the uterus, but after the expulsion of the fœtus, the introduction of the hand in the uterus, for instance, in order to detach or dislodge the placenta, is particularly delicate and dangerous. It is better in such cases, to wait, if hæmorrhage does not impose immediate intervention. In a recent case, M. Siredey has seen the placenta rendered seventeen days after confinement. By means of intrauterine antiseptic injections we can prevent the decomposition and septæmia. After delivery, we should cover the vulva with a piece of carbolized gauze or a compress soaked in a solution of carbolic acid of one-fiftieth. This vulva being in this way protected at the same time leaving sufficient drain for the lochia. The linen soiled by the lochia must be frequently changed, and the parts well washed several times a day, especially after micturition or defecation. If any wounds of the vulva or perineum exist, they should be the object of special attention; we should immediately after delivery, wash them with alcoholized water or carbolized solution of one-fiftieth. If the lochia becomes fetid we should use tepid injections of carbolized solution of one one-hundredth. The canula used should be used only for each individual patient, and carefully disinfected at each operation. If the fetidity of the lochia persists, we can assure ourselves as to the location of the neck of the womb, and practice intrauterine injections. We can watch at the same time the involution of the uterus; if it does not seem to contract fast enough, we can stimulate it by means of ergot of rye. We should feed the puerperæ from the commencement of confinement, and if much loss of blood has taken place, give *l'eau-de-vie*.

When will the mother be permitted to get up? . We cannot too strongly protest against the prejudice of the *ninth day* so fatal to many puerperæ. The term of nine days is altogether too short, in general. In fact, the time when they should be allowed to get up depends upon the general state, and the more or less contraction of the uterus. It is necessary that the mother should be strong enough to stand up alone; that the uterus has fallen under the pubis, that is, about its normal size, and should not be the seat of any spontaneous pains or pains provoked by palpation.

Encumbrance and the contagion in lying-in hospital has been long regarded as the principal factors in the etiology of puerperal fever. To-day, grace to hygienic progress, we can say that a maternal hospital well kept, a *maternité modèle*, offers less danger even than confinements at the residence. It would be too long to enumerate all the conditions that would answer for such a hospital; let us simply say that the indispensable precautions are, namely; absence of incumbrance, ventilation and cleanliness of the halls, the immediate isolation of all sick puerperæ, the cleanliness of dressings, instruments, *personnel*, etc. If puerperæ outside of the hospital, in cities, are less exposed in finding themselves in the midst of an epidemic focus, she can meet defective installations, leading to other causes of infection. Mr. Siredey reports several observations, in his practice, that plainly show the influence of organic matter in a state of putrefaction, emanation from dunghills, privies, etc. Accidents occurring upon butchers' and pork-butchers' wives, that could not be explained by any other causes. The neighborhood of slaughter-houses, amphitheatres of dissection are fatal, and we should dread to attend confinements in such places. Further, where numerous families of workmen are heaped together in unwholesome lodgings, as we find in the majority of large cities. If the location or surroundings have any importance in point of view to the infection, what should we not say in regard of the *accoucheurs*, students, midwives, hospital attendants, and in general of the entire *personnel* that comes in contact with the puerperæ? Here, it is not a mediate, vague contagion difficult to disclose, but a true *inoculation* by the hand of the *accoucheur*, instruments, dressings, etc. Since it is here the greatest danger, we cannot be too careful in regard to preventive measures. We should never practice the touch before having the hands well washed and disinfected; we can employ either carbolized oil or vaseline, but should be careful of using a different cast for each patient, M. Siredey concludes thus: it is absolute cleanliness of the hands, instruments and every object employed in the care of the patients that seems to sum up a prophylactic formula against puerperal fevers. By declaring himself highly partisan to the antiseptic method, M. Siredey invites us to preconize an antiseptic agent to the exclu-

sion of others. He invites us equally to deeply engage ourselves to the subject of microbes, their nature and action. "We can," says he, "jest the *microbes*, discuss their nature, put to doubt their *rôle* in general diseases, but there remains nevertheless an acquired fact, that since it became known in surgery, that whenever the wound is protected from external germs, most difficult operation can be performed with success." In view of these facts, we are not disposed to discuss the great theoretical questions of the *microbes*. Whatever may be the origin and the intimate nature of its infectious principle, we stop it, or at least we attenuate its effects, whenever we protect the solution of continuity from the germs of the atmosphere.—*Le Progrès Medical*.

CLINICAL LECTURES.

A CASE OF CORNEAL STAPHYLOMA: ENUCLEATION: WITH REMARKS.

BY GEORGE E. FROTHINGHAM, M. D.,

Professor of Materia Medica, Ophthalmic and Aural Surgery, and Clinical Ophthalmology
in Department of Medicine and Surgery of the University of Michigan.

Reported by M. A. G. CRAWFORD.

G. W. Stevenson, aged seventy-seven years, Coldwater, Michigan, admitted to the hospital March 4, 1884. About two years ago, patient noticed a redness at the inner corner of right eye, which gradually extended towards the cornea; in about four weeks after the first appearance, the opacity covered the pupil, destroying his vision entirely. Patient suffered intense pain, day and night for about three months, when, under medical treatment, the pain entirely subsided. The pain had been worse at night, with some photophobia and lachrymation. The right eye is now sensitive to direct pressure upon cornea; the irritability of the eye is not increasing, and he has not had any sympathetic disturbance of left eye at any time.

Appearance of eye.—There is marked bulging forward of anterior part of right eye-ball; the anterior chamber and pupil are entirely obliterated; cornea is opaque, with iris adherent and spread over the entire surface; right eye has no perception of light. Left eye vision, $\frac{15}{30}$.

Diagnosis.—Right eye, complete corneal staphyloma with adherent leucoma. Urine test shows no albumen.

Treatment.—Patient is advised to have right eye enucleated.

March 8: Right eye was enucleated—used ether as an anæsthetic.

March 15: The patient has had considerable swelling of the conjunctival flaps. Treatment has been thorough cleanliness and the use internally of R tinctura ferri chloridi.

March 24: Patient left hospital to-day, is feeling well; swelling has almost entirely disappeared, leaving a healthy promising-looking stump.

Clinical Remarks.—The case which we present to you to-day is one of total staphyloma of the cornea. Corneal staphyloma is a subject of importance to you as students of general medicine; not only because patients will frequently apply to you for relief from the pain or deformity which exists, but because, by a proper understanding of their nature you may, by judicious treatment of the cases which lead to them, prevent their development. The first thing for you to remember is that a corneal staphyloma is a distended cicatrix, the result of corneal ulceration or sloughing. Staphyloma, you may readily infer from this, may be either partial or total. They are partial when the loss of substance involves only a part of the cornea; they are total when it results from sloughing of the whole or nearly the whole of the corneal tissue. Staphyloma may result from a perforating ulcer. The iris at first prolapses, becomes adherent to the margin of the ulcer, being ultimately thickened, strengthened and altered, by deposition and organization of inflammatory exudates; it yields before the intraocular pressure and distends the softened corneal tissue at its base, and ultimately terminates in a conical projection known as partial corneal staphyloma. In other instances, as a result of intense inflammatory action, the whole corneal substance necroses, and we have the iris, covered with inflammatory exudates with its pupil obliterated, as a substitute for the lost external tunic of the eye-ball. This, yielding to the pressure of fluids behind it, or perhaps pressed upon by a dislocated lens, bulges forward more and more, until projecting between the eyelids, and constricted at that portion of the eye-ball strengthened by the ciliary ligament, the whole eye-ball presents somewhat the appearance of a dumb-bell, or as if formed by a smaller anterior globe engrafted upon the anterior portion of the eye-ball proper. Perhaps after projecting to a certain extent, by further consolidation and strengthening of the cicatricial tissue, further development is arrested; and it may remain for years, free from pain, though liable to frequent attacks of inflammation and ulceration by reason of its exposed condition. If we examine one of these we shall find its anterior surface, perhaps, covered with epithelium, and its inner surface covered with pigmented cells, the remains of the uvea. All the rest of the iris being unrecognizable by reason of its incorporation in the cicatricial tissue which, in the course of its organization has destroyed every vestige of the stroma of the iris.

Now you will see by the history of this development that proper care in the earlier stages may prevent this staphylomatous projection and lead to the formation of a flat cicatrix, and thus avoid the deformity and also the danger that attends it.

In partial loss of cornea by partial excision of the iris to allow escape of the aqueous and consequent further dragging and stretching of the tissue, or by a paracentesis frequently repeated, aided by the support of a properly applied pressure bandage, we may often prevent this bulging and secure a flat cicatrix. In complete loss of the cornea, we often find that the lens has become dislocated by the sudden escape of the aqueous, and consequent pressing forward of the vitreous humor, and lies pressing against the iris, causing it to bulge between the lids. In such cases we should evacuate the lens at once and continue the treatment by the methods already suggested. But when a staphyloma is fully formed, exposed as it is, to constant irritation, it is subject to frequent attacks of inflammation which by extending to other parts of the eye-ball give rise to such discomfort as to call for surgical relief. This should be remembered; that complete corneal staphyloma excludes any hope of restoring vision, and that our treatment of the case is conducted on the principles of palliating the discomfort which may arise, of guarding the other eye from sympathetic disturbance, or of relieving the deformity to which it gives rise. The amount of perception of light has been dwelt upon by the authorities as of great importance in determining which operative procedure (ablation or enucleation) to adopt. It has been taught that if the perception of light is good, the operation of ablation or excision should be performed; that if the perception of light is absent or exists to only a slight extent, it is indicative of disease of the deeper structures of the eye; which in the operation of ablation might result in intra-ocular hæmorrhage or suppurative inflammation, and for this reason enucleation had better be performed at once. In other cases it is advised that the staphylomatous projection be removed by excision or ablation, and Critchett's operation, has for many years, been the favorite one recommended in the books and adopted in practice. I will take no time to describe the steps of this operation for I have always condemned its performance and recommended in all cases of complete staphyloma, calling for surgical interference, that the eye be enucleated at once. I am happy to state that there is a tendency on the part of the most experienced operators to adopt this practice, and at the last meeting of the American Medical Association a paper was read by Dr. Chisholm, a former student of Dr. Critchett, which condemned this operation as unsafe, and raised the question for its discussion, as to whether it should ever be performed at all. I was happy to be able to state on that occasion that I had always taught my classes to avoid ablation as an unsafe operation and to enucleate instead.

If we consider for a moment the anatomy of the eye and the formation of a staphyloma, we must see that any operation for its removal must result in the involvement of the

ciliary region of the eye in a dense cicatrix and consequent jeopardization of the other eye by sympathetic irritation. It matters not whether we do this as Critchett recommended by the insertion of sutures, or leave it to the somewhat slower process of organizing exudates. The ultimate result will be the same, the involvement of the ciliary body in the resulting cicatrix; and in the mistaken notion of a better formed stump for the application of an artificial eye, we have incurred the risk of total blindness for our patient, a risk that should never be incurred for any cosmetic effect whatever. I have said "mistaken notion" of procuring a better stump for the adaptation of an artificial eye, and it is a mistake; for in a large majority of cases an artificial eye can be as well or better adapted to the stump which results from enucleation. It should be remembered, however, that this operation of ablation does not always terminate in the preservation of a large movable stump, but that after the anterior part of the eye-ball is removed, the vitreous presses forward and is perhaps, completely evacuated, and the eye-ball suppurates and shrinks to a small and distorted stump, which may or may not be free from pain and irritation, and which possibly may require removal before the artificial eye is adjusted; that, too, after the patient has suffered weeks of torture and all the time in danger of sympathetic disturbance of the other eye. It was to prevent this escape of vitreous and consequent suppuration that Critchett recommended the needles, which you see figured in the cuts, to be inserted before the staphyloma was removed, so that they might act as a support until the edges of the wound could be drawn together by sutures with which these needles are to be armed. But here another danger presents itself—these sutures, if they do not speedily cut their way out, sometimes set up suppurative inflammation by which the contents of the globe become evacuated, terminating in a small and shapeless stump. Indeed this might have been anticipated, that these sutures would act somewhat like the seton which Von Graefe long ago suggested for exciting suppurative inflammation of the eye as a preventive to sympathetic ophthalmia. Indeed this termination was one of the happiest to the patient that could result from this operation. Since by this suppurative process and consequent destruction of the ciliary nerves he was in very much less danger of sympathetic involvement of his remaining eye.

It must be remembered that in the most favorable cases the recovery is slow and tedious after the operation; requiring from four to six weeks for the process of cicatrization, and a still longer period of irritability. I noticed in the last edition of the text-book which I have recommended for your use, that it is especially recommended that you avoid enucleation in infants and that all other expedients should be exhausted before you resort to it. I consider that if in any case we should resort

to the more radical procedure of enucleation as a means of safety to the remaining eye, it should be where total staphyloma occurs in the infant. It is in precisely such cases that it is the most difficult to detect the first symptoms of sympathetic irritation or inflammation, and a diseased and irritable stump is constantly menacing the vision of the patient. The effect of enucleation on the development of the orbit and of the lids are all minor considerations when compared with the preservation of the only remaining eye; and no one will dare to defend the position that enucleation does not afford the greatest safety in this respect.

After having carefully observed the results of practice and weighed all the considerations that should influence our choice in operations for this affection, I can unhesitatingly recommend to you enucleation as the safest for your patient and for the reputation of surgery.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

PECULIAR TUMOR OF THE THIGH: CLINICAL EXAMINATION WITH REMARKS.

BY DONALD MACLEAN M. D.,

Professor of Surgery and Clinical Surgery in the University of Michigan.

Reported by FRANK M. GIER.

This patient, which has just been carried in before you, comes of a long-lived family. So far as he knows, there is no trace or constitutional tendency to tumors or any malignant growths. He is fifty-six years of age and his father and mother are still living and in good health. We will now elicit from the patient the history of his present trouble. I want to work out the history from the patient in your hearing, in order that you may be aided in making the diagnosis. You know that in cases of tumors, I do not generally regard it a matter of any moment, to know the microscopical structure of the growth. But here I regard it of great importance to get as correct knowledge of the nature of this growth as is possible.

The patient gave the following history: One year ago last winter the patient was drawing wood and lifting heavy loads, when suddenly his left knee "gave out" and he sank to the ground. Immediately following the accident there was some pain in the joint, but it was not severe and lasted about a half an hour. He was soon able to resume his labors, but the limb, however, did not recover its original strength, and at times it

was necessary to "save" it while engaged at his farm duties, and to support it with a bandage.

Some time prior to this failure of his knee, he noticed that the joint was stiff. This was most particularly noticed when he attempted to raise his foot to any height, as in stepping up into a wagon or carriage. He did not notice any weakness, nor did he have any evidence of its strength failing until it suddenly yielded. This weakness gradually grew worse until the limb could not sustain the weight of the body. A slight swelling appeared on each side, just above the knee, which was subject to changes, sometimes almost disappearing. The parts around the joint were tender, and at times painful. A blow on the knee or striking it against any object caused the most intense pain. By this time the limb was markedly atrophied, the left limb being nearly one-third smaller than the right. The limb continued to grow weaker, more atrophied and more irritable. September 25, 1883, when barely able to walk about, while attempting to catch a horse, the limb was wrenched or sprained, causing the patient to drop suddenly to the ground. He was carried to the house, and was confined to his bed for six weeks. This accident caused intense pain through the limb. The muscles would cramp and draw the limb up. The pain seemed to be relieved if the limb was forcibly kept in the extended position. These pains continued without much change for three or four days, and then gradually abated. During this period the pain was most intense and excruciating in character.

About this time, a definite growth was for the first time noticed. It appeared as a small tumor about the size of a hen's egg near the upper part of the middle third of the thigh, on the anterior aspect of the limb. The tumor was deep and immovable and seemed attached to the bone. The patient thinks that at that time he felt a beating sensation or pulsation in the tumor. The pain in the limb became sciatic in character, extending along the posterior portion of the thigh and leg, passing around on the anterior surface below the knee. His condition began to gradually improve, and by the middle of December was able to walk out. The beginning of January, however, it began to grow worse, and soon became so bad that no weight could be born on the limb.

Present Condition.—The patient gives evidence of failing health; he is anæmic and very nervous. This latter condition has existed for a long time. The twitching of the muscles is not confined to the diseased leg but is noticable all over the body. He does not sleep well, this wakefulness is not due to pain, as it is not severe enough now to keep him awake, but is the result of his general nervous condition. The tumor on his thigh is large but indefinitely marked; it extends from Pourpart's ligament to the knee, and involves all the structures of the anterior portion of the thigh. The left limb measures

twenty-one inches in circumference and is two inches larger than the right. The mass is hard and firm, at the upper and middle parts of the thigh, but above and at the sides of the knee it is not so hard. Over the lower portion of the growth there can be seen and felt a marked pulsation. This cannot be detected in other parts of the tumor. Glands in the groin are slightly enlarged and tender on pressure.

The history of the disease and the present condition of the patient have been traced. It remains for us to determine the nature and character of the growth. After a general inspection of the limb my first act was to lay my open hand on the tumor, to determine if it pulsates. On careful examination no throb or pulse could be detected in the upper and more prominent portion of the tumor, but on passing my hand over the lower portion of thigh, a very distinct throb was felt just above the patella. The stethoscope, however, does not reveal any bruit. Some of you might think that the pulse of this region is due to muscular twitching; while his whole muscular system is in one constant tremor, the contractions do not have the regular rhythm that characterises arterial contractions. Upon a more thorough examination, the manipulations of which must be conducted very carefully, as there are tender spots over the leg that produce some pain and shock when they are pressed upon, I find the enlargement of the lower part of the thigh to be due to an increase in the size of the femur.

We must arrive at the diagnosis by the process of exclusion. Aneurism is shut out for the following reasons: The most defined portion of the tumor, lying at the apex of Scarpa's triangle, does not pulsate; the superficial veins below the seat of disease are not enlarged, and do not give any evidence of obstruction of the circulation through the deeper veins; the pulsation of the tumor just above the knee is on its anterior aspect; the popliteal space is perfectly free from any growth. It is not a fatty tumor for it has never been free from the surrounding structures; it has grown rapidly and has produced well marked general constitutional disturbances. In fact, we must exclude all ordinary forms of tumors, and malignant growths of the soft parts of the limb.

From the weakened condition of the knee joint which began without any previous indications of disease of its structure, and the present greatly enlarged condition of the femur, pointing to disease of the bone, it is difficult to determine upon the nature of the disease, but from all appearances it is malignant, having its origin in the medullary cavity of the bone. By pressure it has caused absorption of the interior of the bone and of the outer compact portion, through which the tumor crops out. The beating which is seen and felt just above the knee is probably due to the highly vascular nature of the growth.

Regarding the treatment of this case there are two courses

to pursue, the one which is taken will greatly depend upon the wishes of the patient. The surgeon would not be justified in doing any operation short of amputation at the hip joint. This is a grave operation under the most favorable circumstances. In this case, from the extreme nervous condition, and the general unfavorable appearance of the patient, I regard the result of such an operation as very unfavorable. Unless the patient should earnestly request an operation I would not feel it my duty to operate. The other course, and the one which I advise, is to send the patient, home and to prescribe such remedies as will render his condition as comfortable as possible.

EDITORIAL PERISCOPE.

STATISTICS OF MEDICAL PRACTITIONERS IN MICHIGAN.

We wish to call attention to the statistics of the medical practitioners registered under the medical act of the last legislature of Michigan, collected by the secretary of the State Board of Health and published in another column.

Whatever may be said of the deficiencies of the medical act, it has given the people of the state a knowledge of the kind of "Doctors," according to their own sworn statements, which are serving them in their sickness—in those delicate and critical conditions where so much special and exact knowledge is required, and where the most enlightened, careful, and skillful judgement and action are demanded.

The number of practitioners must be regarded as sufficient, it being about the average throughout the United States, and much greater than in most of the countries of Europe. However, the sparseness of our population to the square mile, as compared with the older countries, requires a larger proportion of physician to properly serve the people.

It will be noticed that of the 3,285 registered practitioners in the seventy-six out of the eighty counties of the state, those declaring themselves as regular physicians number 1,583, and to this should be added 398, who, following a common but improper custom as to the name, have reported themselves as of the "Allopathic" school. This makes 1,981 professing to be regular physicians, to 1,285 which we designate as irregulars, of all grades and kinds. Of these latter 490 call themselves Homœopathists and 366 Eclectics. Thus it will be seen that there are about four times as many regular physicians as Homœopathists, and nearly six times as many as of the Eclectics.

Of those professing to be regulars, sixteen per cent. are not graduates, have not completed a full course of study and passed an examination such as is required in regular medical schools, while twenty-six per cent., more than a quarter, of the Homœo-

paths, and fifty-three per cent., more than half, of the Eclectics have failed to take any required course and pass any examination in even the lowest grade of unequipped and irresponsible pretended schools, or mere fraudulent "diploma mills." By this it will be seen on calculation that of the 1,981 reported as regulars, 1,623 are graduates, while of the 490 Homeœopaths only 373 are graduates, and of the 366 Eclectics only 173 have any sort of certified evidence from any school of their qualifications. While, then, there are 1,623 graduates of schools in the regular profession, there are only 566 of the irregulars (Homeœopaths and Eclectics) who have any pretence of diplomas. There are then about three times as many graduates in regular medicine as of the graduates in both the other bodies, or the two irregular medical sects.

Besides those embraced in the three principal so-called "schools" of medicine above enumerated, there are 500 *legal* practitioners, registered on account of having been a certain number of years in practice, who claims to belong to some nondescript persuasions, none of whom, it must be presumed, have had any training in anatomy, physiology, pathology, chemistry or materia medica, in any of the subjects which constitute the foundation or the superstructure of medicine as a technical science or an art. When to these are added the 308 claiming to be regulars, but without diplomas, and the 117 Homeœopaths and the 193 Eclectics who have received no endorsement from even irregular schools, we have 1,118 authorized practitioners under the laws of the state, who can present no evidence from any corporate body of their professional or any other educational qualifications. Thus in our state, boasting, and very justly, of its advanced public educational system, with its common school in every neighborhood, its graded and high schools in all considerable towns, with its normal school, its agricultural college, and its *university* with all the departments well manned and equipped, ranking among the highest in the country, liberal in its range of studies and offering at a very moderate price an extended medical education, of the 3,285 registered practitioners, 1,118, or over one third of the whole, are without proper evidence of professional qualifications, and most of them are known to be destitute of all scientific knowledge. In this enlightened state, with this public system of almost free education, not to mention the many excellent more private and incorporated schools and colleges scattered among us, we patronize a thousand persons, in what should be a learned profession, who are acknowledged to be destitute of learning. They are legally qualified practitioners, and according to the "new code" of the medical society of the State of New York, can be met in consultation and treated as professional brethren by members of scientific medical societies, and are countenanced and encouraged in practising as a

business upon the health and the lives of the people, without even a rudimentary knowledge of the art they assume. They can enforce remuneration for their "professional" services by law, though some of them would be obliged to sign receipts of payment by their (X) "mark!"

This disgraceful state of things exists under our new medical law, and yet this new law, imperfect as it is, is far better than the previous laws or absence of laws under which this class of practitioners have obtained a foot-hold.

By this new law, which requires that a statement be made under a responsible oath, and which in order to practice, must be registered in the office of the county clerk, showing the claims of each person to professional standing, a step has been taken. We know where we stand; and we may indulge the hope that the intelligence of the state and an enlightened regard for the general interest, a desire for the protection of the *people*, and not alone or chiefly for the protection of the medical profession, will cause other laws to follow which in time will wipe this blot from our state.

A. B. P.

COLORED DOCTORS.

The eighth annual commencement of the Meharry medical department of the Central Tennessee College, was held February 21. Diplomas were awarded to eight candidates. The alumni now numbers forty-eight, representing thirteen of the Southern and Western States. This work of making colored physicians, until lately, has received but little attention. It has been but a few years that the colored man has been offered any opportunity to study medicine. With but a few exceptions the doors of all Northern medical institutions are practically closed to them. It is, however, only a matter of time, when this prejudice will be corrected. In many of the leading literary, theological and normal schools, colored applicants for studentships are admitted. These institutions are furnishing editors, ministers and teachers, who, in their respective stations, are rapidly filling the spiritual and educational necessities of their own race, and when medical colleges are provided for them, or when they are privileged to study in the many schools throughout the country, the colored race will soon have their own physicians.

The young men who have previously graduated from the Meharry school at Nashville, from the medical department of the Howard University at Washington, and from other places where colored students are admitted, have been successful in their work, and have been received and aided by the resident white physicians.

We learn from the *Daily American*, of Nashville, that Meharry school has a graded course, and that daily recitations

are required throughout the whole course; that the work of the institution is endorsed by the other medical colleges of Nashville, and by many leading medical men of Northern cities.

The work is good, and it is hoped that this and other schools that aim to give medical educations to colored men, will receive the support necessary for their success and the thorough training of those who are preparing for the important work that awaits them.

CONDENSATIONS.

The Senate has confirmed the appointment of Medical Director Francis M. Gunnell as Surgeon-General and Chief of the Bureau of Medicine and Surgery of the Navy.

DR. JOSEPH COATS, of Glasgow, author of the manual of pathology, reviewed in this number, is a candidate for the position of professor of pathology, which the University of Cambridge will soon elect.

It is now pretty definitely understood that Professor Alfred Stille will retire from the chair of practice of medicine in the medical department of the University of Pennsylvania, and that Dr. William Pepper, the present Provost of the University, will succeed him.

CHICAGO has thirteen hospitals, including the United States Marine Hospital. They furnish one thousand one hundred and ninety-one beds. With the exception of a few buildings of more recent construction, these institutions occupy structures that were erected without due regard to sanitation.

"COFFEE-ESSENCE," an article used in some of the cheap coffee houses of New York City, has been analyzed by order of the Sanitary Bureau, and it found that many of the specimens have been grossly adulterated with dried blood and other most pernicious substances. It is said the manufacturers will be prosecuted.

POCKET ELECTRIC BATTERY.—The dangers and inconvenience of carrying an electric battery have prevented physicians making more frequent use of electricity in their practice. Batteries that give the Faradic and primary currents are usually of complicated construction, and are liable to get out of order. There is always danger of breaking the cells or spilling the acid. The Electro-Medical Battery Company of Kalamazoo, Michigan, have done much toward removing all these objections in giving

to the profession the Improved American Pocket Battery. This small battery is safe, simple in its construction, and very easily prepared for using. It gives both the Faradic and primary currents. Any strength of current can be obtained. The poles are changed without changing cords. The character of the current can be instantly changed. The whole battery, with its conducting cords and electrodes, are stored away in a small wooden case which is of such proportions that it can be conveniently carried in any ordinary coat pocket or small hand-satchel.

NEW PUBLICATIONS.

REPORT OF THE NORTHWESTERN HOSPITAL.

The First Annual Report of the Northwestern Hospital for Women and Children, Minneapolis, Minnesota, shows that this institution has been in operation since November 1, 1882. The officers and medical staff are composed entirely of women. In connection with the hospital is a "Training School for Nurses" and a "Free Dispensary." Applicants for admission as students must present certificates testifying to their good moral character and sound health. They are also examined in the English branches, and, when approved, are received one month on probation without compensation, at which time, if their requirements are satisfactory, they are accepted as pupil nurses on signing an agreement to remain one year and obey the rules of the school and hospital.

The report of the medical officers, Drs. Mary S. Whetstone and Mary G. Hood, shows that they have treated ninety-seven patients, with the most encouraging results. The undertaking is a laudable one and commends itself to the attention and consideration of ladies of other cities. The work of this institution is distinctively "woman's work for women." In connection with the management of the hospital is a society of young ladies styled, "The Young Ladies' Auxillary Society," whose object is to furnish linen, house decorations, fruits and flowers. Their report shows that they have faithfully performed their duty.

A MANUAL OF PATHOLOGY. By Joseph Coats, M. D., Pathologist of the Western Infirmary and the Sick Children's Hospital, Glasgow; Lecturer of Pathology in the Western Infirmary; Examiner in Pathology in the University of Glasgow; Formerly Pathologist to the Royal Infirmary; and President of the Pathological and Clinical Society of Glasgow. Published in the United States by Henry C. Lea's Son & Co., Philadelphia.

There can be said of this work that which cannot be remarked of every scientific book published, that it meets a

necessity. In this day of rapid scientific development, new books are demanded. Pathologists, in the past few years have made so many wonderful discoveries, and the science of pathology has made such rapid progress, that a work which discards all old theories, and presents only such views that are regarded as facts or believed to be such, is welcomed by student, teacher, and practitioner. The volume prepared by Dr. Coats not only receives this welcome, but it fills a want felt by all who have wished to keep abreast with the rapid advancement made in pathological teachings.

The scope of the work is much more extensive than that of most works on the subject. It includes that which is usually found in works limited to pathological anatomy, and to general pathology. The advantage of this is stated in the following:

"It will be acknowledged that the whole aim of pathological anatomy is to elucidate the actual vital processes of disease. That the subject gains in interest and intelligibility when the etiology, anatomy and general pathology are all taken into account in forming a general conception of each morbid condition."

The work is divided into two parts. The first part pertains to general diseases; the second to diseases of the special organs and systems. In Part First, those diseases are taken up, which are not confined to any tissue. This part includes the following subjects: The affections of the circulation and of the blood, inflammation, retrograde changes, hypertrophy, repair and regeneration, infective tumors proper, and parasites.

That portion of the book allotted to the affections of the circulation and of the blood, considers hyperæmia and anæmia in their various forms, their condition, characteristics and results. Thrombosis and embolism are defined and described, and the effects and the changes which they undergo after their formation are given. The causes which produce *hæmorrhage*, the process and means of stopping hemorrhage, and the history of the blood which has escaped is next studied. *Œdema* and dropsy, leukæmia, diabetes mellitus, uræmia, etc., are reviewed, giving causes, predisposing conditions, the chemical physiology, and the pathology, both general and special.

Inflammation is the second chief subject. The etiology is given with principal phenomena, which are stated under four heads; the state of the vessels, the inflammatory exudate, the changes in the tissues and new formation, and the individual forms of inflammation.

Retrograde metamorphoses includes necroses, gangrene, atrophy, infiltration and degeneration.

The difference between normal growth or development, and hypertrophy and the processes of each, and the distinguishment of the process of repair of injury and restoration of lost

parts, from that of hypertrophy and mere growth, make up another chapter.

Syphilis and tubercloses, with lupus, leprosy, and glanders and farcy, compose the subject of *Infective Tumors* (granulation—tissue tumors). In either syphilis or tuberculosis the disease is spreading, and due to some virus, which has the power of self-propagation, and the reproduction of the same kind of lesion distant to its original seat. In both the virus is found to be a micro-organism, which acts as an irritant, the results of which, in some cases are not distinguishable from those of inflammation. The local concentrated action of this irritant produces lesions, the character of tumors formed of granulation tissue. In considering tubercle and tuberculosis, the author regards the lesions of acute miliary tuberculosis, which appear in diverse organs and occurring symmetrically in bilateral organs, as evidence that the virus has been circulating in the blood, and producing its effect in such organs as are favorable to its self-propagation.

The artificial production of general tuberculosis, and its local production by inoculation, are treated as facts. The author regards that Kock's discoveries confirm the view, that virus of tuberculosis is a particular form of micro-organism, a bacillus. This special bacterium being found in the miliary, phthisical, and scrofulous tubercle, bovine, and the spontaneous tuberculosis of guinea-pigs, rabbits and monkeys; in tubercle produced by inoculation in animals; and also in scrofulous disease of the lymphatic glands and of the synovial membrane. The area of the tubercular process is more extended than it was formerly supposed to be; from the virus being present in the products of scrofulous formations, and when taken from scrofulous sources being capable of producing tuberculosis by inoculation—the area of tuberculosis, including that of *scrofula*. According to these views, and they seem to be confirmed by investigators, scrofulous disease is not a simple inflammatory swelling, but a tuberculous process.

The author regards the infective character of the tubercular virus, as clearly proven, and considers it not a difficult matter to understand how the organisms get into the body. Concerning the source of the tubercular virus the author's views are seen in the following quotation:

"It has been stated that in acute miliary tuberculosis the virus is present in the blood, but this does not quite explain the whole. The virus is often present in the blood without producing this general tuberculosis. For instance, in phthisis, pulmonalis there are often a few tubercles in the liver and kidneys, and the virus must have reached these organs by the blood. Then in local tuberculosis it is difficult to understand how the virus can have reached such organs as the kidneys or the joints; except by the blood.

"In regard to local tuberculosis it is to be presumed that the virus is introduced in small quantity, and in order to its propagation two things are necessary. In the first place the virus must be allowed to tarry in the part, and in the second place it must find a fitting nidus. It seems as if the normal tissue had the power of destroying small quantities of the virus. But if the tissues are defective in vitality, and especially if along with that, the blood stagnates in them, then we may have the virus, if introduced, propagating itself and producing tuberculosis. The source of the virus is not far to seek. If phthisis pulmonalis is a tubercular disease, and if, as Kock and Ehrlich have shown, the spectrum of such patients contains myriads of the specific bacillus, then the air of towns must contain it in abundance, and every one must inhale it. But it is only persons who have natural or acquired weakness that become the subjects of local tuberculosis. The virus may be introduced by the food as well as the air, and in this connection it is important to note that the bacillus of bovine tuberculosis appears to be identical with that of human tuberculosis. There is reason to believe that the milk of tubercular cows contains the virus, which may thus find access to man. The virus then having been introduced by the air or in the food may lodge in the lungs or intestine, and in persons predisposed may develop tubercular disease at the seat of its entrance. But if the place of entrance does not afford a fitting nidus, the virus may be carried beyond. It will most readily be carried by the lymphatics to the nearest lymphatic glands, and may thence pass into the blood. In children it seems as if the virus was peculiarly liable to lodge in the mesenteric glands after being taken in by the food. Again the virus may get into the blood, but it does not develop unless it finds some part of the body fit for its reproduction. In many cases of scrofulous and tubercular disease, there has been, previous to their development, some injury or disease of the particular part in which they have occurred. For instance in scrofulous synovitis, there is very commonly some history of an injury as the starting-point of the disease, which is really a local tuberculosis of the joint."

Morbid growths or tumors are first considered generally: As to origin and development the explanation of Cohnheini is reviewed. This theory supposes "that the primordial tumor is a piece of tissue left over as it were from the embryonic power of growth and development." The experiments used to enforce this theory are very ingenious and very applicable to some tumors. As to growth and extension, those, which apart from mechanical effects, do not influence surrounding structures, are classed as innocent or simple, "while those which have a tendency to infiltrate neighboring tissue are designated as *malignant*, the malignancy of which may be local or general."

The author's classification is taken from the stand-point,

which has for its basis the structure of the growth, making three classes. The first class includes tumors of a single, simple physiological tissue, as adipose tissue, connective tissue, cartilage, bone, etc. Second, tumors into whose structure more than one simple tissue enter. Third, tumors composed mainly of cells.

The subject of parasites is quite fully discussed. They are divided into two chief classes: (1) Vegetable; and (2) animal. Bacteria or micro-organisms, in a general sense, are first considered. The question of source is very clearly answered. Their forms and characters are described. Cohn's classification gives four forms, namely, the spherical or globular, the small rod-shaped, the larger rod-shaped or thread-like, and the spiral. The author regards the first two so closely related that they are classed together and are called *cocco-bacteria*; and the more definitely rod-shaped or thread-like form make another class called bacilli; the third class whose relations are somewhat doubtful, is the *spirilla*. These varieties are separately described, and the difference in their forms, character and modes of propagation, various methods for their detection in fluids and in solid tissue, are given. Their influence on living tissue is plainly stated; that the ordinary bacteria, which swarm in the intestines and on other surfaces of the body, are incapable of penetrating the living tissues, but when death occurs they immediately pass into them; when they exist in open wounds they find a ready access to the tissue and the blood. In the pus of acute abscesses the micrococci are found abundantly, and whenever there is active inflammatory suppuration they are seen in the discharging fluid and in the surrounding tissue. Those micro-organisms which occur in decomposing fluids have the greatest power of penetrating into, and of propagating themselves inside, the body. Whenever they are absorbed into the blood, they are very irritating and produce local inflammations, as well as general symptoms. When these constitutional symptoms exist without internal local suppuration and the formation of abscess, the morbid condition is called *septicæmia*, but when there are metastatic inflammations and suppuration, the term *pyæmia* is applied.

The difference between *putrid* or *septic poisoning* and *putrid* or *septic infection* is plainly indicated. The symptoms of the former being due to chemical poisoning of the blood; the results of the other to the action on the organism. From the observations given, the author shows that the bacteria of putrid matter in their relation to living tissue, may conveniently be divided into two classes. The one produces chemical matters which are poisonous to living animals but in themselves innocuous. The other class are capable of propagating themselves in the living body, rapidly producing conditions which are fatal. This latter class includes all bacteria capable of propagating

themselves in the living organism and are consequently known as *pathogenetic* bacteria.

The great importance of these pathogenetic organisms in regard to septic infection and other diseases, is freely considered. The author regards the bacteria of pyæmia, whether in their seat of origin or in the embolisms which are secondarily produced, different in their nature and relations from the ordinary bacteria of decompositions. Communicability is a striking characteristic of the pathogenetic variety. The high degree of communicability of purpuræ fevers being due to these micro-organisms.

Regarding the presence and effect of these self-propagating bacteria in acute specific diseases, the author takes the advanced view and states: "Bacteria have been found in the tissue of a large number of acute diseases in man, and most of these diseases belong to the cases of zynotics. Among the diseases in which, up to the present, such organisms have been seen may be mentioned, small-pox, scarlet fever, measles, diphtheria, acute rheumatism, erysipelas, typhoid and typhus fevers, splenic relapsing fever, pneumonia, leprosy, tuberculosis." Most of these diseases being infectious, the inquiries to what extent this virus is related to micro-organism? whether these organisms can be cultivated out of the body? and what is known about complete or comparative immunity against further attacks? These questions are considered under (1) the relation of micro-organisms to zynotic diseases; (2) cultivation of pathogenetic organisms outside of the body, including bacillus anthracis and tubercular bacillus; (3) the question of immunity.

Part Second is devoted to the diseases of the special organs and systems. Malformations, atrophy, hypertrophy, infiltrations and degenerations, injuries and rupture, valvular defects, coagula and tumors of the heart; inflammation, syphilitic diseases, and aneurism of blood-vessels; diseases of the spleen, lymphatics and the bone marrow, are included under diseases of the organs of circulation. That portion of the work pertaining to the nervous system is not confined to the diseases of the different elements that make up the system but a concise review is made of the anatomy, particularly the histology and the physiology of the nerves, spinal cord and brain. In dealing with the organs of respiration, the author does not limit himself to the cellular pathology of the various tissues but includes much that is given in text-books on practice under the heads of etiology and diagnosis. The diseases of the alimentary canal, liver, pancreas, urinary organs, male and female organs of generation, bones and joints, and the skin are similarly treated.

The work gives evidence that Dr. Coats is familiar with the disadvantages that arise from making a treatise too exclusive, and that he appreciated a want of the student and practitioner.

MEDICAL DIGEST.

FEVER AND ABORTION.

A case lately described before the Paris academy of medicine, in which diphtheria was complicated by abortion, has given rise to some discussion. One or two similar cases are on record. The question arises, Does diphtheria act as a stimulant of uterine action? or are we to regard the miscarriage which now and then accompanies it as a mere result of fortuitous circumstances? The accidental theory is one which cannot be altogether negatived, so many slight mischances may precipitate parturition. On the other hand, one or two examples do not suffice to found a doctrine of the abortifacient action of diphtheria. Nevertheless, a good deal of indirect evidence gathered from the behavior of other infectious diseases seems to imply that the latter view may occasionally hold good. Thus, if typhoid or typhus fever come on during pregnancy, labor is not unfrequently premature. It is much more commonly so in small-pox, while in relapsing fever premature birth is the rule. What is there in these diseases which requires that, while often insufficient to destroy the mother, they should take fatal effect upon the fœtus, and while permitting the regular, though impaired action of other organs, should totally arrest the existing function of the uterus? The question is a difficult one to answer perfectly, but it will help us to do so if we consider the double state here present. A normal condition which necessitates localized over-nutrition, is encroached upon by one of disease implying more or less inflammatory action with fever, and associated with the presence at some point, or even throughout the body, of the elements of contagion. This being so, it is not remarkable that, while all parts of the body more or less feel the effect of the stimulated circulation, that part chiefly does so at which there already exists a physiological hyperæmia. The selective property of congestion is well seen in the phenomena of congenital syphilis, which, particularly in infancy, affects in a marked degree the seats of active growth, as joints, and the cranial centers of ossification. Alcoholism shows a similar tendency, and is especially in point. The frequency and regularity with which indulgence in drink is followed by abortion, is such as to strongly suggest a direct relationship of cause and effect. Uterine complications in fever may, therefore, be explained on the hypothesis of local inflammation. General congestion acquires a greater local intensity on the principle of simple addition. On the other hand, the germ element cannot be excluded. With our present knowledge, it is only reasonable to admit that circulating disease-germs can become arrested and develop in the over-

nourished decidua, and so constitute a source of uterine irritation. In this connection, we remark that in small-pox and relapsing fever—diseases in which the blood is impregnated with organisms from an early period—abortion, as said, is much more common than in typhoid fever, where the specific contagium remains for a long time confined to the alimentary tract. A third suggestion, applicable to the case of diphtheria, is that the excess of carbonic acid in the blood in that disease, the result of difficult respiration, leads to convulsive expulsion of the uterine contents. No doubt excess of carbonic acid will induce convulsion, and the latter, perhaps, abortion; but the frequency with which women in fever miscarry when blood-æration is not materially interfered with, the uncertainty as to what really is the etiology of convulsion, and the comparative rarity of abortion in diphtheria itself, lead us to doubt whether asphyxia furnishes the true explanation. The evidence we have adduced rather goes to support a theory of direct uterine irritation arising in some cases out of simple inflammation; in others out of inflammation due to local concentration of infective germs. In any case the subject touches one of wider than uterine significance, and will reward careful investigation.—*British Medical Journal*.

COMMON VINEGAR IN POST PARTUM HÆMORRHAGE.

In bringing to the notice of the profession the simple remedy of common vinegar in the treatment of post partum hæmorrhage, Dr. Penrose, of Philadelphia, speaks of it in the highest terms, and if it is capable of accomplishing all he claims, it will supplant all other remedies in cases where the hæmorrhage is not controlled by the ordinary methods. He describes his method of using it in the following quotation:

I pour a few tablespoonfuls into a vessel, dip into it some clean rag, or clean pocket handkerchief. I then carry the saturated rag with my hand into the cavity of the uterus and squeeze it; the effect of the vinegar flowing over the sides of the cavity of the uterus, and through the vagina is magical. The relaxed and flabby uterine muscle instantly responds. The organ at once assumes, what I will term its gizzard-like feel, shrinking down upon and compressing the operating hand, and in the vast majority of cases, all hæmorrhage ceases instantly; should one application of vinegar fail to secure sufficient contraction, the hand can be withdrawn, and a second or even a third application can be made, until the uterus shall contract sufficiently to stop the flow of blood.

The following are the advantages claimed for the remedy: (1) It can always be easily obtained—every household, even the humblest having a vinegar cruet; (2) it can be applied

instantly and without apparatus; (3) it always cures the hæmorrhage, or rather, it has never failed to do so in his practice. It is sufficiently irritating to excite the most benumbed and sluggish uterus to contract, while at the same time, it is not so irritating that its subsequent effects are injurious; (4) it is an admirable antiseptic. Professor Zweifel, of Erlangen, in a paper on the prevention of puerperal fever, considers vinegar an excellent substitute for carbolic or salicylic acid; (5) it acts on the lining membrane of the uterus, and on the gaping orifices of the torn utero-placental vessels as a valuable astringent.

PERINEAL SWEATING: SACRACHE AND BACK-ACHE.

In a clinical lecture "On Some Minor Ailments" (*Medical Times*) Dr. J Mathews Duncan, with other symptoms and disorders, made the following remarks:

In inveterate cases, however much they may be minor, it is necessary to enter minutely and carefully into every particular, and this is true, of none more than that of "whites." A patient will add, as a tail to her case, that she has whites; or she will say she is cured, all except whites; or she will complain simply of very bad whites. By this she implies that she has a large amount of unhealthy discharge from the vagina; white or nearly white; and this she fears, understanding that it is very dangerous, or at least weakening. Probably also she has used divers lotions without avail for a lengthened period.

Now, it is common to find that this case has been quite misunderstood, and consequently mismanaged: Examination by the speculum discovering no mass of mucus or the matter of whites, no such quantity as would cause discharge. It is indeed not rare, with such complaint, to find the passage drier than natural. Such women it is sufficient to tell, that they have no whites, that there is nothing to be cured, that they should give up the use of injections of every kind; and it is good to add that, if all proves not to be right, the patient should return with the whites present, and with the diapers worn, or any evidence of the disease.

When she comes back, you may find that she has had some whites after a long walk or long standing—a result which is scarcely to be deprecated. Or you may find some superficial irritation of the vestibule or vaginal orifice, from which a white or non-purulent discharge has come, and which may be easily cured by an appropriate application: and the same may be said of eczema of the vulva. Frequently all she produces is a cloth damp with perineal sweat, and often stained brown by it. Lately we had in "Martha" an aggravated case of this kind from a distant county. As we could find nothing, the woman was pressed to produce the evidence of her disease for

which she had been long treated, and which so alarmed her as to make her glad to encounter the inconvenience and expense of coming to the hospital. She said it came on when walking, and she was accordingly sent to walk; and with an air of triumph, she then showed a diaper with a small brown stain of feculent odor. The woman was quite simple and ingenious, and believed that this stain was vaginal whites; it was plainly some brown mucus from the anus.

When women get fat and sweat freely, they often have such moisture about the anus and genitals. This is very disagreeable to them, and, unless correctly instructed regarding it, they are easily induced to believe it is morbid, and the result of vaginal or uterine disease. Both men and women, however careful and cleanly, have their linen moistened and often stained brown, especially if they have walked much; and such a discharge a woman is easily led to believe to be whites, and an indication of disease of the womb.

Sudden gushes of watery fluid on the linen are sometimes otherwise explained. Not very long ago a patient consulted me for this, believing that it came from an ovarian cyst, and required constant treatment to prevent the cyst closing. I could find no disease by local examination; but I was also told that when it occurred the patient was very alarmed and nervous, and this led me to suspect that it might be urine. The fluid was collected in a cup, and found to have all the qualities of urine. The diagnosis, communicated to the ingenious patient, that her disease was merely nervous discharge of urine, was enough for her cure, and she was sent away rejoicing.

But I must further add, that some sudden copious watery discharges I have been quite unable to explain, and have tried to satisfy myself that they were from the glands of Cowper. The neck of the womb may suddenly secrete copiously, but the secretion is very viscid and not in such large quantities, so far as I have observed, as to explain the gushes I am speaking of.

Cases of this kind may be minor examples of *hydrops tubæ profluens*. This is a disease probably more frequent than is generally supposed, but certainly very rare in its distinct and greater forms. A case lately came under my notice, where the gushes of watery and slightly viscid fluid were great, and had a general history as follows: Gradually increasing hypogastric pain and general constitutional disturbance, then copious flow from vagina and relief for a varying length of time. When the woman was at ease there was found to be only an enlarged uterus; when she was in pain, and before the discharge, there was distinctly connected with the uterus, and lying on its left side, a large and increasing tense and somewhat tender cyst.

There is no more common, and therefore no more important, symptom of uterine disease, and especially of disease of the neck of the womb, than *sacrache*. The pain is dull, or an ache rather

than a pain; it is situated at, or near the base of the sacrum; and referring to it, the patient puts her hand to the part. I say with emphasis, "at or near" and it is desirable to make this more definite. A pain below the middle of the sacrum is not "at or near," and a pain above the middle of the lumbar spine is not "at or near." Such pains and aches do not point to the womb as the characteristic sacache does; but the characteristic sacache only points in that direction; it is not, in itself, nearly sufficient, not even strong evidence, of disease of the womb. Occurring in a virgin, it would not, alone, unless very severe and inveterate, lead you to make an actual examination of the womb.

Other back-aches, that is, pains in other regions of the back, not the sacache, may accompany uterine disease, but do not point to the womb, are not symptoms rationally held as indicating womb disease. Unfortunately, women are, at present, so under the influence of bad medical instruction, that they regard all pains in the back, from the occiput to the coccyx, as nearly sure indication of uterine mischief, and demanding uterine treatment.

The sacache of womb disease may be constant, but generally it comes and goes. Frequently it is dispelled by lying, is felt on going to bed, and has disappeared before morning, and long standing makes it reach its highest pitch. When it is otherwise, that is, when the ache is worse in the morning before getting out of bed, or is relieved by walking, then it is certainly not uterine. I have said that you must not regard all sacaches or other back-aches as uterine. They are common in men and in women. A weakly woman, who attends to all her pains, can do no standing or walking without back-ache, and often it is a sacache; especially, if she has a long back, will she suffer in this way.

The pains liable to be confused with real sacache are all in the lower back, about the lumbar spine; it is only such that might mislead any rational physician. Regarding them you will get some light from noticing the causes of the same pains in men. Now I find that weakly men are liable to these aches, sacral or lumbar, in walking or standing; and in many they are produced by excessive venereal indulgence.

THE PROGNOSIS OF CHRONIC NON-SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.

In a paper read in the Section of Otology, by Dr. McBride, of Edinburgh, the following factors of deafness from chronic non-suppurative inflammation of the middle ear were enumerated: (1) Obstruction of the Eustachian tube; (2) swelling of the tympanic mucous membrane, due to infiltration of lymphoid cells; (3) accompanying the last named condition there must of

necessity, be present more or less free exudation. As a result of disease or abuse of treatment, the tympanic membrane may have become flaccid, so that from loss of tension it is unable to fulfil its function. These factors of deafness are all susceptible of two other pathological conditions, which are by no means so amenable to remedies namely; (4) thickening of the parts within the tympanum, and the formations of adhesions, where their existence is detrimental to hearing; (5) secondary disease of the labyrinth.

With these premises established, the various data which influence the prognosis were considered. Hereditary tendency to chronic non-suppurative tympanic disease, a syphilitic taint, are all of more or less unfavorable significance. Hereditary deafness is often of that form known as proliferous catarrh, and the same may be said of that produced by syphilis. A gouty or rheumatic tendency is often found to exist in those who are afflicted with symptoms pointing to a like pathological condition of the tympanum. Tinnitus, slight at first, but gradually increasing in amount and duration, until it is nearly constantly a source of extreme annoyance, hearing is better in a noise, are most unpromising symptoms. Both point to the presence of adventitious fibrous tissue, or even bone, the result of chronic inflammatory changes. The latter symptom being probably due to impaction or ankylosis of the stapes.

Even if the tuning-fork test points to affection of the sound perceiving apparatus, the case on this account alone should not be abandoned, if additional tests reveal chronic disease of the middle ear.

The substance of the membrane is rarely changed sufficient to account for marked impairment in hearing. It may be thickened, or atrophied and flaccid, opaque patches may exist, and the author describes a streaky, stringy opacity in a membrane that may be but little altered in transparency except these opaque fibrous-looking lines. This condition is noticed in those insidious cases in which the hearing goes from bad to worse, or at best remains bad.

When the drumhead is distinctly indrawn, but not fixed in this position by adhesions, there are hopes of effecting improvement. The appearance of fluid behind the drum-membrane renders the prognosis very hopeful. In chronic naso-pharyngeal inflammation the condition of the pharyngeal membrane may be taken as approximately representing that of the tympanum, when the inner ear is affected by the extension of the catarrhal process along the Eustachian tubes. When the pharyngitis is characterized by unorganized moist swelling and excessive secretion, a similar condition of the middle ear as part factor of deafness; while if an inflammatory fibrous deposit is found in the pharynx, it is very probable that thickening or adhesions exist within the tympanic cavity.

Auscultation during the use of the air-douche enables one to determine whether air passes through a wide or narrowed tube, and whether the latter contains any free exudation. Inspection of the membrane, while compressed air is driven through the Eustachian tubes, may also furnish valuable information as to the presence of adhesions.

The factors of deafness which are liable to be influenced by the effect of the air-douche are: (1) Obstruction of the Eustachian tube—so much of the deafness as is due to this cause alone being at once completely, though temporarily banished; (2) excessive secretion, causing the presence of exudation within the tympanum. The action of the air-douche will probably scatter the secretion, thus relieving the clogging of the ossicles and membrane; (3) adhesions delicate enough to be influenced by the current of air, and so situated as to be stretched or ruptured by its action; (4) a secondary result of the disease or abuse of treatment—a flaccid condition of the drum-membrane is temporarily improved, which may sometimes be maintained by the use of the air-bag.

If inflation of the middle ear produce improvement, however temporary, there is hope, because the lesion is a curable one, the prospect of benefit being in direct proportion to the duration of such temporary improvement. If several injections of air produce no change it is safe to suspect the existence of an incurable factor of deafness, namely, the presence of adhesions or thickening, which cannot be acted upon by curative means. In making this conclusion, the condition of the nasopharyngeal mucous membrane, the phenomena yielded by the catheter, and auscultation must be considered.

SALICYLIC ACID IN CEREBRO-SPINAL MENINGITIS.

In an article (*Saint Louis Courier of Medicine*) Dr. D. C. Ramsey makes the following conclusions: (1) The analogy existing between rheumatism and cerebro-spinal meningitis would suggest, and be good reason for, the use of similar remedies in both diseases; (2) salicylic acid being the best remedy, almost a specific in the treatment of acute articular rheumatism, would be a strong indication for its use in cerebro-spinal meningitis; (3) it produces marked reduction in the temperature; the fever being thus lowered, the tissue-destruction and the onward progress of the inflammation is checked, thereby giving the patient rest; (4) it controls the intensely annoying metastatic pains of head, back, elbow and knee giving the patient ease; (5) it exerts a direct influence for good over the inflammation itself, and can be taken in frequent large doses without bad effect, having given a boy fifteen years of age, half drachm doses every four hours for three or four days, with

the only result of a great benefit in all the symptoms connected with the disease is, I think, conclusive evidence of its harmlessness; (6) its good effects are soon apparent, and it does not interfere with the use of other measures of relief, as ice, blisters, etc.; (7) the best mode of using the remedy is to administer large doses frequently. For adults begin on doses of fifteen grains repeated every two hours, and increase the dose as may be found necessary to produce the desired effect, to two scruples, at intervals of two hours, if need be. When the disease is under control, which will be determined by the reduction in temperature, relief of pain and placid countenance, decrease the dose, give at longer intervals, but still continue the use of it in small doses as long as the least symptom is present indicative of the disease.

ACTION OF OPIUM ALKALOIDS.

From an investigation made by Dr. Von Schroeder, of Strasburg, we learn that the opium alkaloids which resemble opium from the fact of their acting in some manner upon the central nervous system, holds good only for mammals. In the frog narcotine, codeine, papaverine and thebaine have also a paralyzing action on the motor ganglia of the heart. These alkaloids, however, agree with morphia not only in the organ they effect but in the nature of their action. The symptoms may be divided into stages: (1) Narcosis due to a paralytic action on the brain, followed by (2) tetanus due to increased irritability of the spinal cord. This agreement allows these alkaloids to unite with morphia into one group. Notwithstanding this qualitative agreement between the action of these alkaloids on the one hand, and that of morphia on the other, there are considerable quantitative differences in the development and persistence of the narcotic and tetanic stages. The narcosis these alkaloids produce, unlike that of morphia, is not very deep and passes quickly away; in the case of thebaine it occurs in the frog and not only in mammals. The rapid development of the tetanic stage characterizes the action of this alkaloid. There is not, as in the case of morphia, a progressive paralysis gradually destroying the functions of the different parts of the brain; the action quickly extends over the whole brain and remains slight while symptoms of irritation have already begun. This fact renders it advisable to break up the group of opium alkaloids into two sub-groups, the first of which may be called the morphine group, characterized by the prominence of the narcotic stage, while in the other which may be called the codeine group, the tetanic stage is more prominent, and the narcosis less so. The members of these groups may be arranged as follows, so that each subse-

quent member has a weaker narcotic, and in the codeine group, has at the same time, a stronger irritant action. In the morphine group oxydimorphine, in the codeine group papaverine, codeine, narcotine, thebaine. The codeine group contains also hydrocotarin, laudanosi and cryptopin; but at present we know too little about them to assign a place in the group to them with certainty. The same may be said of codethyline. The codeine group becomes closely allied by its last members with the strychnine group. The members of the codeine group should not be used therapeutically for their narcotic action. In the codeines produced from morphia by the addition of alcohol radicals, such as codethyline ($C_{17}H_{18}NO_2(OC_2H_5)$) obtained from morphine by the introduction of ethyl, the narcotic action is diminished, while the convulsive action is increased in proportion to the number of atoms of hydrogen substituted by alcoholic radicals. In the alkaloids produced from morphine by oxidation (oxydimorphine and oxymorphine) their narcotic action is diminished, without the convulsant action being increased; narceine has no apparent physiological action.

THE SIMULTANEOUS OCCURRENCE OF CHANCROID AND CHANCER.

That chancroid and the initial lesion of syphilis can occur at the same time in a person who has exposed himself has been both asserted and denied. In the *Medical News*, October 20, 1883, Dr. John Fergusson gives the following case, which he believes will set the possibility of this dual occurrence beyond doubt:

Mr. J. C., a student known to the author for years, and on whose word the utmost reliance could be placed, called on him and remarked that he thought he had been "caught." Three nights before he had visited "two houses." He said he had never been with a woman previously. That he was never out again was known for a fact. At first there was considerable irritation, and by the end of the week a well-marked chancroid. By the end of four weeks the sore was healed. Some five or six days from the date of the last call regarding the local sore, he came again, and stated that he thought he felt a hard nodule on the opposite side of the penis, just behind the glans. This initial sore gradually took on the characters of the indolent ulcer with a hard, widely extended base. In due time the inguinal glands enlarged, the rash on the skin appeared and there was great loss of appetite, severe headache, much cachexia and a good deal of fever. There was no doubt as to the real character of the two sores, for the first was a most typical "soft sore," while the second was followed by constitutional syphilis. The patient had frequented on this one

occasion two places of ill-fame, and succeeded in bringing to the author the woman he had been with in the first place. On examination a plentiful supply of chancroids was found but no syphilis. It was therefore concluded that the young man contracted his local sores from the person above mentioned, and that his severer disease was due to the intercourse with the second woman. It was also proved that another student contracted syphilis from this second woman about the same date as did Mr. J. C.

THE COLD BATH IN ENTERIC FEVER.

From a paper (*Lancet*) read before the Medical Society of London, February 18, 1884, by Dr. Sidney Coupland, which excited sharp discussion, the following extract is taken:

"This is undoubtedly the most powerful antipyretic agent we possess, and the only measure that has succeeded in saving life threatened by hyperpyrexia. Even those who mistrust its routine employment in typhoid fever, recognize its power, and no one would dispute its efficacy or value as a last resort in such urgent cases. But it is the employment of the bath to control the whole course of the fever that I am considering. Brand's rules are explicit enough; he urges the early commencement of the treatment, and the repetition of the bath every three hours, if the temperature rises to 102° Fahrenheit, (39° centigrade) in the axilla, the temperature of the bath not being above 68° Fahrenheit (20° centigrade). I have myself so far departed from these rules as to prescribe a bath at a temperature of 103° Fahrenheit, and in several cases it has been necessary to repeat it in three hours when the fever is at its height. The usual temperature of the bath was 75° Fahrenheit to 70° Fahrenheit, and its duration ten or fifteen minutes, but both these conditions are varied according to the way in which the patient bears the immersion. In some, especially spare people, the graduated bath, that is, commencing at 90° Fahrenheit, and cooled to 75° Fahrenheit with longer immersion, or one at 85° Fahrenheit, is borne better than the colder bath of shorter duration. It often happens that the temperature of the body has risen above 104° Fahrenheit, in spite of hourly observations between the baths, when the next bath is given. Again in very severe cases, hardly any reduction in temperature is effected, or the actual reduction and duration of after-fall is so slight, that within a very short time the fever has risen to its previous height. Dr. Ord has recommended the graduated bath, and says that it is most efficient and most safely applied early in enteric fever, but he does not think it necessary to repeat it at shorter intervals than twelve hours, an apparent revival of the temperature often subsiding after such a period."

MISCELLANEOUS ITEMS.

BELLEVUE MEDICAL COLLEGE has adopted a rule that its diploma shall hereafter be in English instead of Latin.

OLIVER WENDELL HOLMES says that the great secret of success in every form of quackery is hope kept alive in the patient; while the too fatal gift of science is a prognosis of despair.

A CURIOUS suit has been entered at Washington for trial. A gentleman has sued his family physician, asking a thousand dollars for malpractice, the cause being that the latter failed to prevent the spread of contagious disease in the family.

OIL OF EVERGREEN (salicylate of methyl) diluted with an equal quantity of olive oil or soap liniment, applied externally to the joints affected by acute rheumatism, gives prompt relief, and from pleasant odor, is very agreeable to use.—*Cincinnati Lancet and Clinic*.

REMEDY FOR TOOTHACHE.—Dr. Hugo Erichsen, (*Med. Chir. Correspondenz Blatt*, Buffalo), claims that to clean out the hole in the tooth, and then carefully fill it with cotton wool soaked in a mixture of equal parts of croton, chloral hydrate, and carbolic acid, will give speedy relief.

DR. FROTHERGILL'S ASTHMA MIXTURE.—R. Tincture lobelia five ounces; ammonii-iodidi, three drachms; ammonii bromidi three drachms; syrup tolutani, three drachms. M. Teaspoonfull every two, three, or four hours. This gives relief in a few minutes, and sometimes the relief is permanent.—*Weekly Medical Review*, October 13.

LOUIS BAUER, M. D., M. R. C. S., England, Professor of Surgery in and Dean of College of Physicians and Surgeons, Saint Louis, Missouri, says: "The concentrated extract of *Pinus Canadensis* has established for itself the most unqualified commendation as an astringent, and it scarcely requires any further affirmation on my part."

PRURITUS VULVÆ.—Dr. William Goodell recommends for pruritus vulvæ: R. Carbolic acid, one drachm; morphine sulphate, ten grains; boracic acid, two drachms; vaseline, two ounces. M. Also, pat the parts with a sponge soaked in boiling-hot water. This is also a most excellent application for that rawness so often found between the thighs of the newly born.—*Medical Herald*.

PROFESSORS BARTHOLOW AND DA COSTA agree that an antipyretic dose of quinine is not less than five grains every two hours until four doses are taken, or else thirty grains in two or three doses taken very close together. The former believes a small dose of morphine given with the quinine is the best thing to counteract the unpleasant cerebral symptoms of the latter.—*Louisville Medical News.*

TEETHING.—Bromide of sodium: A few grains dissolved in a tumblerful of water, so that each teaspoonful may represent a half grain, will quickly quiet the nervous disturbance of teething infants, or fever not dependent upon the onset of an inflammation or other grave trouble, but rather such as may follow excitement of any kind. The dose should be repeated every ten or fifteen minutes.—*Medical Summary.*

CANCER OF THE BREAST IN A GIRL.—A remarkable instance of the breast being attacked with cancer had lately occurred in a patient aged only thirteen years, who was last week under the care of Sir George Porter, in the Meath Hospital, Dublin. The part implicated was removed on the 24th ultimo, and the case is interesting in consequence of the youth of the patient. The cancer was not scirrhus, but consisted of a soft variety of the disease.—*Lancet.*

CINDERS IN THE EYE.—One of the minor trials in railway travel arises from cinders in the eye. A simple and effective cure may be found in one or two grains of flax-seed, which can be placed in the eye without pain or injury. As they dissolve, a glutinous substance is formed, which envelops any foreign body that may be under the lid and the whole is washed out. A dozen of these seeds should constitute a part of every traveler's outfit.—*Popular Science News.*

AN English chemist who had been called upon to analyze several socks and stockings of a red color, which had been found to cause great irritation to the skin of the wearers, discovered the cause of the trouble in the tin salt used as a mordant in fixing the dye. He succeeded in obtaining over twenty-two grains of tin in the form of the dioxide. When acted upon by acid perspiration the tin oxide forms an exceedingly irritating compound.—*American Medical Weekly.*

PROFESSOR RUDOLPH VIRCHOW has resigned from the Association of German Physicians. This step was taken on account of the Association having publicly censured him for writing a note of thanks to an apothecary, Brant, who sent him a box of pilulæ helreticæ (the formula of which is published) during a recent sickness. This note stated that the pills had been bene-

ficial to Professor Virchow. He thinks that the censure was unmerited, and denies that he gave a testimonial at any time for these or any other pills.—*Medical News*.

IODIA.—C. A. Bryce, editor of the *Southern Clinic*, Richmond, Virginia, says: I have had the most gratifying experience with iodine in syphilis. I have treated many hundreds of cases with it, and it is decidedly the best preparation I have ever used for constitutional syphilis, after the moderate use of mercury. Indeed, I generally use it in all cases of syphilis in the final treatment. If I had to select one combination of agents for the entire treatment of constitutional syphilis, after bringing the system under mercurial influence, it would be iodine.

THE INSANE WITNESS.—The United States Supreme Court has recently decided that a lunatic, or person affected with insanity, is admissible as a witness if he have sufficient understanding to apprehend the obligation of an oath, and to be capable of giving a correct account of the matters, which he has seen or heard, with reference to the question at issue; and whether he has that understanding is a question to be determined by the court upon examination of the party himself, and any competent witnesses who can speak to the nature and extent of his insanity.

CHLOROFORM WATER AND ITS THERAPEUTICAL USES.—It may be prepared by putting chloroform into water, irrespective of quantity, agitating well on and off for an hour, letting it stand; after which, when quite clear, it may be decanted off, or drawn off by a syphon. It is a useful stomachic and antispasmodic, well adapted for delicate digestion and may be given in cases of flatulence, colic, or nausea. Two teaspoonfuls every fifteen minutes until relieved. It has been given advantageously in the vomiting of pregnancy. It is also a pleasant menstruum for other medicines.—*Bulletin de Therapeutique*.

PROFESSOR JACCOUD, of the Paris faculty, recommends, the following mixture of glycerine in cases where cod-liver oil is not well tolerated: R. Glycerinæ, ten drachms; sp. vini, gall. of rum, three drachms; oil menth. piperit, one drop. M. This quantity may be divided into two or three doses, and taken just after or between meals. This mixture has an agreeable taste, is facile of digestion, and does not cause disgust, even after being used several months without intermission. Professor Jaccoud has obtained marked benefit from its use in several cases of phthisis.—*Medical and Surgical Reporter*.

A CASE of tænia, as a cause of aphasia, is related by Dr. Armangue (*Practitioner*). The patient, a woman of sixty, was

seized with vertigo, and a few days later lost the memory of words for some days. After the expulsion of a tape-room there was no return of her nervous troubles. He quotes a case of aphasia in a child, cured by the expulsion of numerous trichoccephali, published by Daniel Gibson; and a case of aphasia coinciding with tænia, published by Siedel. The editor adds a case, observed by Langer, in Germany, of reflex hemiplegia and hemianæsthesia with convulsive seizures, in a little girl of twelve, cured by expelling a tænia.

CONSTIPATION IN INFANTS.—Most physicians, the older ones especially, are well acquainted with the method of preparing flour by tying it up in small parcels and boiling a long while—several hours—then peeling off the outside and grating the hard ball which is left. Made into a gruel, this forms an excellent food in dysentery and diarrhœa, possessing as it does, a positive astringent effect on the bowels. A writer in the *London Lancet* says that bran prepared in the same manner has the opposite effect, and when made into a gruel with milk serves to keep open the otherwise constipated bowels of infants. The suggestion is valuable should the statement be verified.—*Pacific Medical and Surgical Journal*.

DR. SKALWEIT, Hanover, in a lecture on "Nourishment with special reference to Infants' Foods," says: I have particularly examined the properties of the Anglo-Swiss Condensed Milk Company's Milk Food and compared it with other foods. While the latter yield a pap more or less thick in consistency, the Anglo-Swiss Milk Food, when cooked with *the same quantity* of water, yields a liquid of about the consistency of milk, and in which the greater part of the prepared starch is held in solution. Besides, this food is as rich in albumen [or nitrogenous constituents] as any other similar preparation, or even richer, and we cannot hesitate for a moment in recommending this new Milk Food both from a sanitary and a chemical point of view.

CONVALLARIA MAJALIS.—Dr. W. S. Gottheil, House Physician of Charity Hospital, New York, contributes to the *Therapeutic Gazette*, for January, 1884, a detailed account of his use of convallaria majalis in fifteen cases which he has under his treatment in the hospital. Nine of these cases were of organic heart disease. Five were cases of cardiac failure in acute rheumatism, hemorrhages or phthisis, and one was a case of Bright's disease. The effects of the drug may be briefly stated to be satisfactory, as compared with those which would be expected to follow the use of digitalis under like circumstances, and the results would seem to justify a thorough trial at the hands of the profession of this proposed substitute for the latter

drug. It possesses the very important negative property of producing no cumulative effect,—a desideratum which has been long felt by the profession.

ECZEMA CAPITIS.—In the common eczemas of the head in children, so numerous in dispensary practice, after two or three thorough cleansings the daily application of the following salve nearly always suffices to obtain rapid and lasting results:

R. Acid salicylic.....	gr. x.
Tinct benz.....	m. xx.
Vaseline.....	3j.

M. Ft. Ung.

On other parts where a soft salve, which easily melts as this, is not suitable, and where a firm dressing or a drying effect is desired, the following paste should be rubbed on

R. Acid salicylic.....	gr. xix.
Vaseline	3j.
Zinci oxidi, amyl.....	aa 3ss.

M. Leniter terend, Fiat paste (Sic).—*Edinburgh Medical Journal.*

THE SIGNIFICANCE OF DOUBLE SCIATICA.—In a recent clinical lecture Professor Charcot described the case of a woman aged sixty-one, who had been operated on several times for scirrhus of the breast. She developed very severe double sciatica, with pain in the region of both anterior crural nerves. The pains were exasperated by the erect position, so that walking became impossible. There was tenderness in the lumbar and sacral region of the spinal column, but there was no muscular atrophy, alteration of reflexes, or disturbance of the functions of the bladder or rectum. Professor Charcot insisted that double sciatica is always symptomatic, and the causes are (a) diabetes; (b) certain spinal diseases, for example, locomotor ataxy and meningo-myelitis; and (c) some alteration in the nerves themselves. There was no sugar in the urine, nor any evidence of those spinal affections; and in the absence of any sign of a tumor in the pelvis the readiest explanation was cancerous invasion of the vertebral column, causing pressure on the nerves. Secondary cancer of the spinal column was held by Cazalis to be very common, especially after scirrhus of the breast, but it may be also met with in cancer of the stomach. In practice it is important to note that the presence of double sciatica in cancerous patients indicates metastasis, and contra-indicates operative interference. Conversely, severe neuralgic pains in patients at the age for cancer should suggest a careful examination of the breasts, the stomach and uterus. Such pseudo-neuralgic pains are the ordinary clinical signs of vertebral cancer, but a fungus mass may project from the spine, in which case the vertebræ will be infiltrated, and the consequences will be similar to those of Pott's disease.—*Boston Medical and Surgical Journal.*

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ORIGINAL ARTICLES.

A CASE OF POISONING FROM HYOSCYAMINE.

BY A. J. BURDENO, M. D., WAYNE, MICHIGAN,
Assistant Physician at Wayne County House and Asylum.

On Sunday afternoon, February 11, 1884, I was summoned to see A. B., aged seventy-five years, a somewhat enfeebled person. On arriving at his bedside I found the patient unconscious, head thrown back, and held so, not with excessive rigidity, but more than normal, face flushed, pupils dilated, pulse rapid, arterial tension much diminished, and breathing stertorous and labored.

On inquiring into the history of the case I found that the patient had never had any such attacks of unconsciousness, and got trace of nothing that could act as a sufficient cause to produce such grave symptoms, excepting that he had eaten an excessively large dinner. Upon looking around the room I noticed a bottle, which upon bringing to my nostrils, I found to contain a solution of Merck's amorphous hyoscyamine, a quantity of which had been taken by mistake for spiritus frumenti. This solution was of such a strength that every ten minims contained one-twentieth of a grain, and I found the patient had taken within an hour about ten drams of the mixture, equivalent to three grains. I immediately procured a soft rubber catheter which was introduced into the stomach through the nostrils, and with a Higginson syringe attached, proceeded

to administer a sufficient quantity of tepid water and mustard to produce free emesis. One-fourth grain of morphia sulphate was administered hypodermically, and the stomach thoroughly washed out with tepid water to remove any of the poison that might not have been evacuated. I directed cold applications to the head and left the patient, to return again, in one hour. Upon my return I found the patient in much the same condition in which he had been left, excepting his pulse was stronger and his pupils somewhat contracted. Another hypodermic of one-fourth grain morphia sulphate was administered and I concluded to remain with my patient during the night. Two hours after the administration of this second dose he had improved considerably. His pupils were steadily contracting, his pulse becoming stronger and less rapid, his face less flushed, and voluntary motions began to be manifested. At this time, about 9 P. M., I again gave one-fourth grain morphia and at about 11 P. M. he became conscious. He was unable to speak however, owing either to a paralysis of the muscles of phonation or to the dryness of the throat. This latter was so excessive and continued that he was not able to swallow anything for some hours, not even fluids. From this time the morphia was given in one-sixteenth grain doses every two hours until 5 A. M., with great improvement in every respect, except the dryness of the throat, which obstinately continued.

At this time, the patient being yet unable to swallow, I gave by means of the soft rubber catheter and Higginson syringe the following:

R. Spiritus ætheris nitrosi.....	ʒij.
Tinct. digitalis.....	ʒij.
Potassii acetatis.....	gr. x.
Aquæ puræ.....	ʒiv.

The urine previous to the administration of the above prescription was scant and very highly colored.

I regret to say no test of the urine was made with a view of determining the amount of the alkaloid eliminated through this channel. The patient continued to improve and in two days was able to sit up in bed and read the daily paper, as had been his custom. He complained of nothing except the excessive dryness of his throat and of a ropy tenacious mucus which was expectorated with the greatest difficulty and considerable pain. To relieve this difficulty I resorted to the fluid extract of jaborandi, with very gratifying results, the throat becoming moist and the patient resting with more comfort. The throat being relieved I detected a mild form of bronchitis which probably co-existed with the other severer symptoms, and which yielded to the usual expectorant treatment.

The result in this case clearly demonstrates the value and utility of sulphate of morphia as a physiological antidote to hyoscyamine. The administration of the morphia (in all a

grain and one-half) was followed by none of its ordinary physiological effects; on the contrary the patient rallied more and more after each dose. Another feature in the case was the rapidity with which the distressing throat symptoms yielded to the jaborandi.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

MEDICAL CLINIC.

UNDER ALONZO B. PALMER, M. D., LL. D.,

Professor of Practice and Pathology in the University of Michigan.

REPORTED BY W. E. SPICER.

COMPLICATED DISEASE OF THE LUNGS: TREATMENT AND REMARKS.

Jeremiah Murphy, aged thirty-nine. Admitted to hospital December 19, 1883.

History.—Married, and by occupation a farmer. Father died twenty-five years ago with consumption. With this exception the family history is good. The patient has had catarrh and bronchitis for several years. About the 1st of July, 1883, he took cold, which was followed with an attack of "congestion" of the lungs, the left lung being more particularly affected. This attack confined him to his bed about one week; he then became better, but his lungs did not regain their former healthy condition. They remained weak and irritable, at times becoming worse. A cough has continued which is more severe during the night; the sputa is scant, of a yellowish-white color, and thick and tenacious in character. It is raised more abundantly in the morning after rising. Has shortness of breath on much exertion.

Present condition.—The patient is anæmic. Has lost flesh, and is weak. Appetite and digestion poor, bowels constipated. Temperature, 99°; pulse, 104; and respiration, 30. Urine for twenty-four hours, seven-hundred cubic centimeters; specific gravity, ten-hundred and twenty-six; acid reaction; color and odor normal; heavy deposit of urates. Microscopic examination shows the presence of oxalates of calcium, a few spermatozoa, mucus and amorphous urates.

Physical examination.—December 21: Percussion reveals slight dullness at lower part of left lung. Over other portions of the lungs the percussion note is normal. By auscultation the respiratory murmur is found to be diminished in both lungs, but more particularly in the lower part of the left lung.

Examination on posterior portion of thorax reveals the same conditions.

Treatment.—Hypophosphites of lime and soda were prescribed with the following:

R. Hydrargyri chloridum corrosivum..... gr. j.
Aque menthæ piperitæ..... ʒij.

M. Sig. Take ʒj after breakfast and tea.

also,

R. Potassii iodidi..... ʒvj.
Fl. ex. glycyrrhizæ..... ʒij.

M. Sig. Take ʒj three times daily.

December 28: No material change in the condition of the lungs, but the stomach becoming disturbed, the hypophosphites were discontinued and the following was given to allay the irritation, and to aid digestion:

R. Liquor bismuthi et pepsini..... ʒj.

Sig. To be taken before each meal.

January 5: The patient's general condition improved. The dose of the bichloride of mercury was diminished and the following added:

R. Potassii chloratis..... ʒj.
Aque..... ʒlii.

Sig. To be taken during each day.

January 9: General condition of the patient continues to improve. Sweating at night has become more profuse. To correct this, sulphate of atropia in one-twentieth grain doses, given. No change made in his other medicines; they have had marked beneficial effects.

January 12: Continues to improve. The mode of giving the iodidi changed, the following prescription being ordered:

R. Potassii iodidi..... ʒvj.
Fl. ex. glycyrrhizæ..... ʒij.
Fl. ex. Hamamelidis..... ʒij.
Glycerinæ..... ʒij.

M. Sig. Dose: ʒj three times daily.

January 26: Since the last record there has been a steady improvement. The appetite has improved; former strength is rapidly returning, and has been gaining in flesh. In the physical examination, percussion failed to show more than a very slight difference in the resonance of the lungs. Auscultation gave a weakened respiratory murmur over the entire portion of the chest; no exaggeration of the expiratory sound in the lower part of the left lung. Over the posterior wall of thorax no marked difference in percussion note between the right and left apices. The respiration not quite as free at top of right lung. Diminished murmur over both lungs. In comparison with previous examination there has been a marked clearing up of the inflammatory deposits. No change made in the treatment.

January 30: Patient feels much better, and has continued to improve since last date. Obstinate constipation is the only one of his former symptoms that has not been greatly improved. To relieve this condition a teaspoonful of unground yellow mustard seed is advised to be taken night and morning, and, also an enema, if necessary, to keep the bowels open. The former treatment ordered to be continued.

February 13: Patient continues to improve. The bichloride of mercury is dropped from the treatment, and the patient ordered to take drachm doses of Scott's emulsion of cod-liver oil, the dose to be gradually enlarged if the stomach will bear it. Also,

R. Acidi phosphorici dil	℥ss.
Tinctura cardemoni.....	℥j.
Syrupi zingiberis.....	℥ij.
Quiniæ sulphatis.....	gr. xx.

M. Sig. Dose: ℥i to be taken with the oil emulsion in ℥iv of water three times daily.

February 16: All medicine but that ordered on the 13th suspended.

February 27: The patient feels quite well and strong. A slight cough continues. Bowels much improved but inclined to be constipated. Drachm doses of turpentine emulsion ordered to be taken three times a day.

March 8: Physical examination of lungs shows that the deposit is being absorbed. He is to continue the emulsions of turpentine and cod-liver oil, and return to taking

R. Potassii iodidi.....	℥ss.
Fl. ex. Hamamelidis.....	℥iv.

M. Sig. Dose: ℥j three times a day, between meals and at bed time.

March 11: Very much improved. None of the former bad symptoms existing but a very mild cough. Dismissed.

The above notes are taken from the record kept by the clerk of the clinic. They give an outline of the case of J. M. A brief and imperfect summary of the clinical remarks of the professor made from time to time to the class, is as follows:

Remarks.—This case may be regarded as a specimen of others resembling it, which are frequently appearing in the hospital and coming before us in the clinic. He states that he has had catarrh and bronchitis for several years, showing a tendency to disease of the respiratory apparatus, when several months ago he "took cold" and had an attack of "congestion of the lungs." This no doubt means that he had an attack of pneumonia, probably subacute, and involving the interstitial pulmonary tissue. He was in bed for a week, then became better, but not entirely relieved—a cough, shortness of breath, feverishness and weakness continuing. This account, together with the present symptoms and physical signs, leads me to infer that a subacute, now a chronic inflammatory condition,

has been implanted upon a very chronic but rather mild bronchitis; and that it is chiefly located in the *lower* part of his left lung. This morbid process commencing in the alveoli and the small bronchial tubes, has, I think, extended to the connective tissue, involving blood-vessels and lymphatics, and producing the alterations in structure indicated by the symptoms and signs.

A very important question at once arises: Have we here tubercles? The patient's father died of "consumption," and this, so far as it goes, founds the idea that tubercles are present here. This is by no means conclusive however, and has but little weight with me in this case. The location of the chief difficulty is in the lower part of the lung. Tubercle, especially when primary, is much more likely to appear first in the upper part. This, so far as it goes, tends to the conclusion that there may not be tubercles; but the cough that he has had for some time previous to this inflammatory attack may have been due to tuberculous deposits, or the bronchial irritation may have extended to deeper tissues and tubercles may have been developed. The fibroid hyperplasia resulting from chronic, especially interstitial pneumonia, is apt to undergo cheesy degeneration, and tubercles are likely to be developed in such conditions. There is reason to fear, therefore, that tubercles are present in this case.

The influence of bacteria—of the *bacillus tuberculosis*—in causing tubercle is not yet fully determined; but it is fairly established that where tubercles exist these bacilli are present, whether as causes or consequences of the tubercle is still a question. The strong probability is—perhaps it may be regarded as established—that they are capable of exciting the formation of tubercle; but *it is not established* that they are the *sole cause* of the tuberculous formations. Whatsoever may be the relations of these organisms to tuberculosis, it seems that a peculiar soil is necessary for their action. This peculiarity of soil may depend upon a special state of the general system or upon a condition of local disease in the lung or other tissues.

A condition of chronic inflammation, whether of the minute bronchi, the alveoli or the connective tissue favors the production of tubercle. If caused by bacilli a more favorable soil is afforded by the inflammatory condition. Healthy lung tissue in a vigorous healthy person with no morbid tendency seems capable of resisting any injurious effect from the bacilli, if these organisms are the cause of the disease.

I have been desirous of having the sputa of this patient carefully, expertly, and exhaustively examined by the microscope, to determine if bacilli were present, but this has not been convenient and it has not been done.

But the question of *treatment* is the important one so far as the interests of the patient are concerned—and we are *all* most

concerned for the interests of the patient. So far as bearing upon treatment, it is not essential that we should know whether bacteria were present or not, as we know of no remedies applicable that are capable of destroying them. The chronic inflammatory condition of the lung is the objective point for treatment, while if there were any remedies capable of preventing the occurrence of tubercles, or of checking their production, or of removing them when produced, they are indicated in this case.

As you are aware, for the modification of these slow inflammatory processes, and for the removal of the *effects* of more active processes, we are in the habit here of depending largely upon the preparations of iodine, particularly upon iodide of potassium, and this has been the chief medicine given. We have also added small doses of the bichloride of mercury with the same object in view. It has been important to consider the strength of the patient, but the mercurial in such cases, so far from being debilitating, often acts as a decided tonic. The iodide has been given with the view also of counteracting the tuberculous condition, present or threatened. I quite agree with the statement of Lebert, that "among the medicines for counteracting tuberculous processes the preparations of iodine hold the first rank." I have confidence also in cod-liver oil and the hypophosphites, and have prescribed them also, as the stomach would bear them. The indications for, and the objects of the other prescriptions made, will be understood without further statements.

In a case like this, and in all cases, where tuberculosis is present or feared, the general health, the nutrition and strength of the patient require attention. Residence in the hospital, by this patient, has continued as long as it is for his interest, and in his present improved condition—and the improvement in the condition of his lungs has been constant, progressive and satisfactory under the treatment he has received—I have advised him to leave and have a change of scenery and climate. His intention is to go among the mountains of North Carolina, and to visit other places as his condition may seem to require.

SURGICAL CLINIC.

UNDER DONALD MACLEAN M. D.,

Professor of Surgery and Clinical Surgery in the University of Michigan.

REPORTED BY FRANK M. GIER.

HYPERTROPHY OF TONSILS.

James V., aged six. Admitted to hospital November 8, 1883.

History.—One year ago the parents of the boy first noticed an enlargement of the tonsils, which appeared after a severe cold. Has received local and internal treatment, from the first, but glands have continued to increase in size.

Present condition.—Patient weak and anæmic. The throat filled with the enlarged tonsils. Respiration and deglutition greatly interfered with. Very nervous. Sleep and rest disturbed. Appetite impaired. The general health was becoming so rapidly affected that an immediate operation was advised.

November 10: Patient was placed under the influence of chloroform, and tonsillotomy performed. Both tonsils were removed. The extreme nervous condition of the patient necessitated the use of the anæsthetic. Patient was not retained in the hospital.

HYPERTROPHY OF TONSILS CAUSED BY SWALLOWING
PARIS-GREEN.

Lenora F., aged five. Admitted to hospital November 24, 1883.

History and present condition.—Three years ago the child swallowed some Paris-green. After recovering from the effects of the poison, the child's mother noticed that her tonsils were enlarged. Local applications of tincture of iodine have been made repeatedly and the throat frequently swabbed with solutions of alum, but these local measures were of no benefit. The act of swallowing is performed with difficulty, and in many instances it is followed with choking and fits of severe and prolonged coughing. Respiration not seriously affected. Very dull of hearing. General health good.

November 26: Patient presented to the class and examined. It was very difficult to get a view of the throat. Attempts to depress the tongue produced paroxysms of coughing. The condition of the posterior walls of the pharynx could not be obtained. The patient resisted the introduction into her mouth of any kind of an instrument. From the extreme nervous and timid nature of the child, chloroform was administered and both tonsils removed. Hæmorrhage yielded to a few mouthfuls of water.

November 29: Throat examined and gives no evidence of an operation. The fauces is clear. The patient is able to breathe freely through the posterior nares. The defect in swallowing much improved. The spells of coughing seldom come on and are mild in character.

Remarks.—This simple operation you have already seen performed a number of times, and before the close of the term it will be very frequently repeated.

Before making any extended remarks, explaining the operation, or advancing any arguments in its favor, it will be profitable to speak somewhat generally of this exceedingly common condition of the throat of young children, known as hypertrophy or chronic enlargement of the tonsils. In the case upon

which we have just operated, it has been produced from a cause that is very unusual. It is the frequent result of repeated attacks of acute inflammation of the tonsil, but in children, in by far the great majority of cases, it is one of the evidences that indicate the strumous condition of the whole system. Measles and scarlet fever are not unfrequently the cause. When the affection exists in adults it is most frequently a continuance of trouble, which began in childhood. Without further considering its etiology we know that the tendency to this affection is *not peculiar to strumous individuals*. And in this climate, where the most common exciting cause is the sudden change of weather and temperature, it is of such frequent occurrence that not one of you will have engaged in the practice of medicine any length of time until you will be called upon to relieve the deformity.

From its great frequency it is a condition, that, as a rule, is too lightly passed by. When suspected there is no difficulty in confirming the existence of hypertrophied tonsils. In many cases the signs are so manifest that an inspection of the throat is hardly necessary. From the facial expression alone, enlarged tonsils may be suspected. If they are of any size the pharynx is filled by the conical shaped bodies projecting into the cavity, and interfering with the free passage of air through the nasal passages into the lungs, and the mouth is constantly kept open to provide additional means for the entrance of the required amount of air.

In these more severe cases the evil results are manifold. By interfering with respiration and deglutition, the respiratory and digestive systems become affected and diseased. The imperfectly aerated blood carried to the brain, blunts and stupefies mental action. The sleep is broken and unrefreshing, making the little sufferer, feverish, fretful and irritable. While in this condition neither body nor mind is in a condition for healthful development.

When the mouth is habitually kept open, a permanent deformity of the dental arches is produced, a result not mentioned by most writers. During the period of dental development, the alveolar processes are not formed and subsequently grow up around the teeth in whatever shape they may happen to be arranged. With the mouth constantly open, the lips press unequally on the growing teeth and instead of the symmetrical curve, in the lower jaw the arch is "V" shaped, causing the central incisors of the lower jaw to project beyond the upper teeth, which are also crowded into irregular and deformed positions.

Enlarged tonsils are predisposed to attacks of acute inflammation, each attack accompanied with the severe pain and long train of unpleasant and much dreaded symptoms, and followed by increased thickening of the gland and surrounding

parts. The Eustachian tubes become involved and the sense of hearing affected.

Being the cause of these and other evil results not enumerated, the importance of successful treatment of this very common ailment is evident. In all the cases that come here for treatment, you have seen but one course pursued, that is the excision of a part, usually the greater portion, of the gland. You have also heard how, in nearly every case, medical measures, both local and general, have been tried, but in the end failed to accomplish their removal. When the tonsils are inconsiderable in size, and have no tendency to grow they can be left alone, with the assurance, in which you will be rarely disappointed, that after puberty they will grow smaller in size without treatment. In these cases medical measures are sometimes credited with producing the cure. From the histories which have been elicited in your hearing, you have learned that the local application of iodine, alum and other astringents, while they may have some use as palliatives, they have no power to reduce the size of hypertrophied tonsils. In my experience nothing has proven so sure, safe and expeditious as the simple operation you have just seen me perform. Each time that I have made this operation, in your presence, I have used the same instruments, and have with the same ease and rapidity, been able to remove a sufficient portion of the tonsil to give complete and instant relief.

While the operation is a very simple one, it is not by any means the easiest the surgeon is called upon to make. There are many conditions which materially complicate its execution, and very serious accidents have occurred, a sudden jerk of the head causing the knife to be plunged into the internal carotid artery, or to seriously injure some of the surrounding structures. To remove these dangers and difficulties, great ingenuity has been displayed in the various instruments that have been devised, and named tonsillitomes, amygdalatomes, and tonsil-guillotines. I take from the instrument table, and show you, several of these. I have a very few times in my life been guilty of attempting to remove an enlarged tonsil by means of one of these instruments. I have found them uncertain, unsatisfactory and inefficient. I make use of two instruments, the long vulsellum forceps, to get a good firm hold on the tonsil, and this long-handled knife, which has also quite a long blade, but only a short cutting edge, which is guarded with a probe point. With a knife of this kind, there is no danger of injuring any of the deeper structures, cutting or in any way wounding the posterior wall of pharynx, the tongue, or other neighboring parts.

The operation of excision is so simple, safe and expeditious, as well as nearly perfectly painless, that it does not seem possible that any exception could be made to it. But some individ-

uals decry the procedure, claiming that it is not a complete cure; that in the same individual they must be removed again and again. They argue that the complete eradication of the whole gland is necessary to ensure against a return. We have pointed out that there is a tendency to inflammation and hypertrophy of the tonsils in individuals of a strumous constitution. In such cases if the operation is incompletely or insufficiently done, or if followed some time afterwards by attacks of inflammation, the enlargement may return. The recurrence, under such circumstances, has caused some to doubt the efficacy of the operation. The structure of the tonsil being very similar to that which makes up the lymphatic glands, we can understand, that in persons of very marked strumous disposition, how under exciting causes they might produce an overgrowth for a second time. Even in such cases the probability of a return is very small. In the many hundred times I have performed the operation, I have not had a single case return for a second operation.

While I regard excision the safest and most certain way of producing a positive cure, it is not required in all cases of hypertrophied tonsils. Operative measures are not called for if the swelling is but slight, with no tendency of the gland to frequent attacks of inflammation. The tendency to diminish or atrophy as age advances, should be considered in mild cases. But when the tonsils are sufficiently enlarged as to interfere with respiration, deglutition, or hearing, or the structure so diseased as to give rise to repeated attacks of tonsillitis, my practice is to remove them.

In severe cases in young children who have become weak and irritable, and who are too young to understand the importance of their co-operation, or in patients who cannot control their actions and who shrink from fear of the instruments, an anæsthetic should be given. When the patient is struggling, strangling and squirming around, the operation is unpleasant, uncertain and dangerous. From my own experience, I can say that there is no operation more gratifying to both patient and surgeon than the rapid and skillful removal of a large mass of hypertrophied tonsil, nor is there anything more embarrassing and humiliating to the one, and annoying and discouraging to the other, than the frequent unsuccessful attempts at its removal.

There seemed to be a fear of hæmorrhage from excision, but the precautions that were taken to prevent this are unnecessary. It is only in cases where a hæmorrhage diathesis exists, or where the glands are acutely influenced that there is any danger from free and continuous bleeding. The little bleeding that necessarily follows the operation soon stops spontaneously, or is easily controlled by a swallow or two of ice-water. Should there exist a predisposed condition to hæmorrhage, and the

bleeding continues, a strong solution of galic acid or warm saturate solution of alum may be taken in small quantities.

In severe cases Monsel's salt of iron, or the cautery may have to be used.

In all my cases I have had but three or four cases of hæmorrhage that could be regarded as troublesome. One case was sufficiently remarkable to mention in this connection. The patient, a young lady, came to me under the care of a physician to have her tonsils treated. I regarded the case favorable for operation. No more than the ordinary bleeding followed the operation, but some hours later, while being conveyed to the railroad depot, free quantities of blood welled up, filling the throat, and greatly alarming the patient. These attacks came on repeatedly while travelling home, but were each time stopped by the use of astringents.

Another case, a student in one of the departments of the university, came to me to have his tonsils excised. The operation was quickly performed and attention was called to the fact that there was little or no bleeding. In a few hours, however, very free hæmorrhage came on, and a large quantity of blood was lost, but as soon as local astringents were used (in this case powdered alum dusted upon the cut surface proved the most efficient) the hæmorrhage stopped.

These cases are peculiar from the fact that the bleeding did not immediately follow the operation, but came on some hours afterwards. Later investigation into the second case brought out the fact that at the time of the operation there was some inflammation of the gland, which at the time was not spoken of and it was not detected. I have no doubt the same condition existed in the case of the young lady.

After the operation it is better to confine the patient to the room for a few days. Some simple astringent gargle or solution of chloride of potash may be used.

CLINICAL REMARKS ON A CASE OF SIMPLE FRACTURE OF THE RADIUS AND ULNA FROM A MEDICO-LEGAL STAND-POINT.

Having, within a few days, been placed in the very painful position of expert witness for the plaintiff in a suit for malpractice, I desire briefly to make a few remarks on the case and my relations thereto. In the first place I will read the following notes of the case, as recorded by Dr. E. A. Christian, who kept the records of my clinic last year, and who did it well. Of course these notes were taken by Dr. Christian without any action or interference or knowledge on my part, and many months before any one had the slightest suspicion of the case becoming a medico-legal one. I will state here, however,

that all the essential facts of this history as taken by Dr. Christian, and which I am now going to read for your benefit, were fully corroborated by unimpeachable testimony in court.

History.—B. P. Vance, aged seven, Jasper, Michigan. Patient admitted to hospital March 18, 1882. On Christmas day last, fell from a fence striking upon the left arm. A physician saw him within four hours and made a diagnosis of fracture of both bones of the forearm at the lower end of the upper third without overlapping and scarcely any displacement. The arm was put up in splints but in a somewhat prone position. The doctor dismissed him *with the injunction to return in two weeks*. But at the end of five days the father becoming uneasy at the discolored appearance of the hand, took him to the doctor for the purpose of having the dressing removed. The splint on the posterior aspect of the arm was removed, disclosing a gangrenous condition. The other splint was not disturbed for two weeks, when, upon its removal at that time, a deep slough was disclosed on the front of the arm. After a tedious delay the slough separated and the wound healed. Union had taken place, but all power of pronation and supination is lost. The fingers of the hand are drawn into a flexed position by the contracted tendons.

A bad prognosis was given.

April 29: Returned for advice. Prescribed passive movements. Must be left to nature.—“Hospital Journal,” page 248.

My testimony in the trial consisted of two kinds:

(1) As to facts and opinions based on my actual knowledge of the case from personal examination; and

(2) Answers to hypothetical questions put to me by the attorneys.

So far as the former is concerned I could only say that when first seen by me the arm was functionally destroyed. There was no reasonable prospect of its ever being anything better than a useless and unsightly burden. The bones had united, with the forearm in a position of extreme pronation, the extensor muscles had sloughed out to a great extent, the flexor tendons were fixed in a strongly flexed position. Large unsightly scars existed on the dorsal surface of the hand and forearm. When the patient appeared at the clinic I expressed *no opinion* as to the causes which had induced this unfortunate state of affairs, but I took occasion to say that the utmost care and skill of the surgeon could not always prevent such catastrophies, which have occasionally been met with in the experience of some of the most eminent practitioners of surgery.

As to the second kind of testimony I was asked the question: “Whether in such a case full justice could be done by the doctor without seeing the case more frequently than once in five days.” In reply to this question I said that I had always taught the doctrine as expressed in the following terms

by Dr. Frank Hamilton, at page 365 of the 1880 edition of his great work on "Fractures and Dislocations:" "*Finally, whatever may be the mode of dressing, let me repeat the injunction to examine the arm frequently. No surgeon can do justice to himself or to his patient who does not look at the arm at least once in twenty-four hours during the first ten or fourteen days, and in some cases the patient ought to be seen twice daily.*" While admitting freely that even with this amount and degree of watchfulness things might go wrong and the arm be permanently disabled, I had no alternative but to testify that in this case the doctor (who by the way is not a graduate of any medical college) had in my opinion laid himself open to the charge of undue laxity in its management.

The result of this case was a verdict in favor of the plaintiff for three thousand dollars. From this case an important and impressive lesson is taught the surgeon in the treatment of fractures—*visit the patient frequently.*

EDITORIAL PERISCOPE.

AMERICAN SURGICAL ASSOCIATION.

The American Surgical Association, which met at Washington, April 30, and continued in session four days, approaches more nearly to the "ideal" of a scientific body than any medical society in this country.

It is an association of men of recognized standing and ability in the profession, and it meets solely for the dispatch of business (*scientific business* is referred to); everything like medico-politics is studiously avoided, and a more harmonious, enthusiastic and industrious meeting than the one held at the Smithsonian institute during those four days could not well be imagined. The papers were of the most practical and suggestive description, as may be seen by reference to the programme quoted below.

Not the least instructive and entertaining feature of the proceedings was the discussions on the different papers, which, though animated and independent, were always in good taste and void of offence. Without indulging in comparisons which are "odious" we could mention more than one medical association whose usefulness and position in public estimation would be greatly enhanced, by taking a leaf out of the book of this new but promising addition to the great family of so-called medico-scientific bodies in these United States.

The American Surgical Association has no wish or intention to interfere in any way with the prosperity of any sister society. It has, however, a laudable ambition and a very fixed

determination to set them all an example of earnest, genuine work in the great department of medical science which it has chosen for its own. We will look forward with pleasant anticipations to the appearance of its annual volume of transactions soon to be issued, and of which we will undoubtedly have something to say in due time.

The following is a list of the titles of papers read and the names of the authors:

An Experimental Study of Anæsthetics, by B. A. Watson, A. M., M. D., Jersey City, New Jersey.

Some of the Dangers and Disadvantages of Anæsthesia, by David W. Cheever, M. D., Boston, Massachusetts.

Wounds of the Intestines, by Samuel D. Gross, M. D., LL. D., D. C. L., Philadelphia, Pennsylvania.

Prostatic Calculi, Cases, and Specimens, by Claudius H. Mastin, M. D., LL. D., Mobile, Alabama.

Ligation of Common Femoral Artery, by L. McL. Tiffany, M. D., B. A., Cantab, Baltimore, Maryland.

Traumatic Cephalhydrocele, by P. S. Conner, M. D., Cincinnati, Ohio.

Transfusion, by J. C. Hutchinson, M. D., LL. D., Brooklyn, New York.

Gastrotomy, Œsophagotomy, and Internal Œsophagotomy, in the Treatment of Strictures of the Œsophagus, by Samuel W. Gross, A. M., M. D., Philadelphia, Pennsylvania.

Surgery of the Hand, especially as applied to Railroad Injuries, by Joseph W. Thompson, M. D., Paducah, Kentucky.

Clinical Observations on the treatment of some Railroad Injuries of the Extremities, by James McCann, M. D., Pittsburg, Pennsylvania.

Intra-uterine Compound Fractures, by John A. Brinton, M. D., Philadelphia, Pennsylvania.

Experimental Researches on Cicatrization in Blood-vessels after Ligation, by N. Senn, M. D., Milwaukee, Wisconsin.

The Healing of Arteries after Ligation, by J. Collins Warren, M. D., Boston, Massachusetts.

The Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations, by Moses Gunn, A. M., M. D., LL. D., Chicago, Illinois.

Tracheotomy in Croup, by George W. Gay, M. D., Boston, Massachusetts.

The Mutilate Wedge Principle in the Treatment of Organic Structures of the Urethra, by John S. Coleman, M. D., Augusta, Georgia.

A Contribution to our Knowledge of the Pathology of Trifacial Neuralgia, by J. Ewing Mears, A. M., M. D., Philadelphia, Pennsylvania.

Trephining for Insanity following a Depressed Fracture of the Skull, by William A. Byrd, M. D., Quincy, Illinois.

Trephining for Epilepsy, by William T. Briggs, M. D., Nashville, Tennessee.

Extirpation of the Tongue, by Basil Norris, M. D., U. S. A., Washington, District of Columbia.

Surgical Interference in Cerebral Abscess, by Charles B. Nancrede, M. D., Philadelphia, Pennsylvania.

The Treatment of Indolent Suppurating Bubo by Extirpation, with cases, by T. F. Prewitt, Saint Louis, Missouri.

Artificial Respiration in the Sitting Position, by Henry F. Campbell, A. M., M. D., Augusta, Georgia.

Clinical Notes, by Donald Maclean, M. D., Detroit, Michigan.

Supra Pubic Lithotomy, by W. S. Tremaine, M. D., U. S. A., Buffalo, New York.

Some Points on the Pathology and Surgery of the Prostate, by J. W. S. Gouley, M. D., New York City.

The Localization of Perinephric Inflammation by means of Chemico-Anatomical Study, by John B. Roberts, M. D., Philadelphia, Pennsylvania.

Unsettled Questions in Relation to Injuries of the Head, by David Prince, M. D., Jacksonville, Illinois.

Anæsthesia, and Plaster Paris Bandage in the Treatment of Sciatic Neuralgia, by John A. Cominger, M. D., Indianapolis, Indiana.

Practical View of Neuroplasm, by E. H. Gregory, M. D., Saint Louis, Missouri.

ALCOHOL FOR STUDENTS.

Dr. Clouston, of Edinburgh, has recently delivered an extremely sensible and useful address on the "Effects of the Excessive Use of Alcohol on the Mental Faculties of the Brain," to the students of the University of Edinburgh. He does not take the position of a preacher of "abstinence," but of moderation. "You will understand," he says, "that I have nothing to do with any use of alcohol which cannot be truly said to be excessive—that is, probably damaging or dangerous to the mental powers of the brain." At the close he made his remarks particularly fitting to the university student.

"To conclude, looking at the university student, taking into the account the period of life at which you study, the work you have to do, the unfavorable conditions of life in which you have to live, from a physiological point of view (there is no physiologist who will for a moment pretend that sitting in a stuffy class-room for four or five hours a day is in itself a good thing for a young man), taking the long cold period of our dark winters, when we cannot get enough out-door exercise, taking the fact that neither you nor I know the weak points of

our constitution as taken from our ancestry—taking all these things into consideration, I think that a student will have little reason to blame himself who totally abstains from alcohol during his period of study. You will all admit that the man who does so, avoids certain manifest risks; most of you will admit that he will do more work; you will all admit that he does not lose very much of the best kind of sound enjoyment during his period of study; you will all admit that after his studies are over, and when he has developed into full manhood, he will be likely to enjoy it all the better, as well as more safely, if he takes to the moderate use of alcohol. After that some of the risks are over. And if he should remain a total abstainer all his life, it may not be the worst thing he can do. I am not here to suggest to you what I did not practice myself, for during four years of my studies I was a total abstainer, and it was a course I never have had reason to regret."

These remarks were made with the full appreciation that the tendency of students who have to go through a monotonous routine, is to seek in their recreation the excitement and excess found only in club rooms and public houses. Students do not haunt these places from the demands of established habits of intemperance, but for the lively and gay companionship found there. But while this temporarily satisfies the social nature, the mind is so exhausted by the excessive and unnatural activity produced by the artificial stimulation, that even after it recovers from the fatigue it must, to a greater or less degree, be permanently weakened. No one engaged in continuous mental labor is able to do that work as well and indulge in alcoholic stimulants. The student who heeds the words of Dr. Clouston, whether in school or engaged in his profession, will have no cause to regret his course.

LOCOMOTOR ATAXIA AND SYPHILIS.

A paper showing the relations of syphilis and locomotor ataxia was read by Dr. Weber, before the New York Academy of Medicine, at its meeting of March 21. From a review of statistics he found the percentage of cases of locomotor ataxia in which syphilis was present, to vary greatly, according to the author. Dr. Weber himself had found syphilis as an ætiological factor less often than other conditions. Rheumatism was the most common. Masturbation in early youth, and continued for some time, was a frequent prominent feature. Concerning treatment of cases in which syphilis appeared in the history, the prognosis, so far as some degree of improvement in the symptoms could enter, was better than in other cases. At the close of the paper the author drew the following conclusions: (1) There was not sufficient evidence to show that syphilis might be the direct cause of a typical form of locomotor

ataxia—in other words, of posterior sclerosis of the cord; (2) there was proof, and plenty of it, that syphilis produced certain lesions in the cord and its meninges as surely, if not as frequently, as in the brain, that these lesions might be, and often were; followed by symptoms of tabes, and that they were generally relieved by prompt and energetic specific treatment, but rarely cured; (3) experience had shown him that the tendency of the syphilitic virus to produce lesions in the nervous centres occurred the sooner, the less its course was interfered with by judicious and long-continued anti-syphilitic treatment. Older cases were more apt to develop neuroses than those of recent date; (4) as shown by all observers, after syphilitic lesions of the cerebral nervous system were once established, they might often be relieved, but seldom, if ever cured, by specific measures—thus, we have reasons in cases of syphilis for insisting on long-continued and timely treatment, for keeping accurate and judicious watch over the patient and for attending to specific symptoms as early as possible; (5) the inunction treatment with mercury in fresh cases of syphilis, was the best means of reducing the disease to an early and harmless latency.

CHLORIDE OF SODIUM IN INFLAMMATORY DISEASES.

“Give your patients chloride of sodium,” is the advice of Dr. Goss, Marietta, Georgia, and he gives the following reasons: “The fact that in severe inflammatory forms of disease salt disappears from the urine, at once, suggests the necessity of giving salt as a restorative. Salt is certainly serviceable in the reconstruction of the blood and tissues, after great exhaustion following disease, and during the continuance of febrile and inflammatory forms of disease. M. Berge, of Belgium, a noted chemist, has shown that common salt is essential to the healthy plasma of blood, and that the fibrin, the albumen, the musculin and the ostein, and all the protein compounds, which take a share in nutrition, become solidified, and the red globules of the blood also are dissolved. These globules are decomposed in a solution of pure albumen, whereas, an albuminous water (like the serum of the blood), containing one-hundredth part of chloride of sodium, preserves these globules without material change. In persons whose blood is deficient in saline elements there is a pallid, chorotic and even albuminuric condition. They have but little, if any, appetite, and the gastric and salivary secretions are greatly diminished.

“In some wounded patients; or those who have undergone surgical operations, if they are fed with unsalted food, the above condition of the blood prevails. Hence, salt is essential to the wounded, as well as to those who are suffering with febrile and inflammatory diseases; and it may be also stated that the blood

absorbs oxygen in direct proportion to the amount of chloride of sodium it contains, and that it stimulates also in the same proportion the chemico-vital act of nutrition, and provokes the expulsion through the kidneys, the lungs and skin, of the nitrogenized elements of regressive nutrition of the various tissues. If these suggestions relative to the wounded and the sick were practiced, surgical operations would not be fatal in as large a per cent. of instances as they now are, nor would as many fever patients die in convalescence as now do from dropsy and debility, from imperfect nutrition. And the above consideration is not the only recommendation to physicians to give chloride of sodium to the wounded, and to those who have to submit to surgical operations, but salt should be given as an antiseptic to destroy vibrones and bacteria known to exist in the blood."

DIPHTHERIA: PATHOLOGICAL RELATIONS AND ETIOLOGY.

During the last few years, some practitioners and health officers in England, have advanced a new theory as the cause of diphtheria. Because in some regions it was prevalent in rural districts and not in the towns of the same region, they infer that it is due to meteorological effects. Similar occurrences have been observed in this state (Michigan). In the reports of the State Board of Health for this State, it is seen that in some of the most sparsely populated regions, the disease repeatedly appears in the most violent and devastating character. The reports of the German Imperial Board of Health show that in the rural districts of Saxony they have similar ravages of the disease. Dr. Soyka has shown that in Munich that diphtheria is most frequent and always present, while enteric fever is most rare in those quarters of the city where no sewerage is provided, where open drainage and cess-pools dug in the porous rocks, are the only provisions made for the removal of surface filth; but in those portions of the city where old sewers exist, enteric fever is most prevalent and diphtheria quite rare. It would appear from this that the foul gas of confined sewer decomposition is more likely to produce enteric fever, and surface filth accumulations to generate the diphtheritic poison.

We see the inferences that must be made from Dr. Soyka's observations are opposite to those made by these English physicians. But when the conditions are studied, upon which both set of inferences are made, they are found to be similar. Any one acquainted with the habits, manner of living, and the condition of the houses of the poor of England, or of the people in those regions of Michigan, where diphtheria has made such fearful ravages, cannot help supporting the theory that surface filth is a cause of the disease. It is in these poor districts of

European countries, and the frontier and backwood regions of this country where the pig-sty, the barn-yard, the foul stagnant pools, surround the house, and are found side by side with cistern and well. In the minds of these English physicians the connection between sewer gas and diphtheria was so strong that when diphtheria was found prevalent in the country all other foul accumulations were overlooked, and its cause attributed to exposure to cold and wet. If, however, the surroundings of the homes of families attacked with the disease be examined they will be found to be very similar to those in Munich.

THE CHOLERA BACILLI.

Since the outbreak of cholera in Egypt, the most persistent efforts have been made by scientists to discover the source of its contagion. Until of late the investigating committees, sent out by the various governments, have been able to show but few results. Their last reports, however, bring something; they contain information which leaves little or no doubt that a specific kind of bacterium has been found that belongs exclusively to cholera. It has characteristics of form and habit which distinguish it from all other forms of bacteria. It is found, without exception, in the bowels of cholera cadavers, and is as positively wanting in the bowels of persons dying from other intestinal diseases. From the sixth report of the German cholera commission by Dr. Koch, the *Medical Times* makes the following abstract, which contains information that settles some previously undecided questions.

At first, on account of the varying pathological appearances presented by the bowel in cholera, and on account of the large number of bacteria always found therein, it was extraordinarily difficult to discover the truth. In most cases death does not occur at the height of the cholera process, but in the reaction period which follows immediately after, and in which such considerable changes take place in the bowel and its contents, that it is impossible from such cases alone to obtain a clear idea of the cholera process. It is not until one has had the opportunity of examining a number of uncomplicated cases, and of comparing with them cases recently attacked, that one can succeed in obtaining a true insight into the pathological relations of cholera. For this reason it was thought right to exercise the greatest caution in interpreting the discoveries made with regard to bacteria in cholera, and to reserve a definite judgment on their causal relation to the disease until we had fully made up our minds on the subject.

In the last report I was able to state that peculiar characters had been found in the bacilli tenanted the cholera bowel, by which they could be distinguished with certainty from other bacteria. Of these features the following are the most characteristic:

The bacilli are not quite like a straight line as other bacilli, but a little curved, like a comma. This curving may even be so marked that the bacilli assume almost a semi-circular outline. In pure cultivation these curved bacilli often give rise to S-shaped forms, and to wavy lines of varying length, the former of which correspond to two individuals, and the latter to a considerable number of cholera bacilli, which have remained in connection as they continued to proliferate. They possess, moreover, movements which are very active, and may be best observed in a drop of the cultivation solution suspended from a covering glass. In such a case one sees the bacilli swim across the field of the microscope with great rapidity in all directions. Their behavior on gelatine is peculiarly characteristic. They form colorless colonies, which at first look as if they were composed of tiny glittering fragments of glass. Gradually these colonies cause the gelatine to melt, and then spread themselves out to a moderate extent. In gelatine cultivation, therefore, this peculiar appearance enables one to distinguish them from other colonies of bacteria with great certainty, and to isolate them from the latter with ease. They can, moreover, be demonstrated with comparative certainty by cultivation on concave slides, as they always betake themselves to the margin of the drop of cultivation liquid, and can there be recognised by their peculiar movements, and, after staining with analine, by their comma-like shape. So far, twenty-two cholera cadavers and seventeen cholera patients have come under examination in Calcutta. All these cases were examined for the presence of the specific bacteria, both by the help of gelatine cultivations and also by microscopical preparations, and, in most cases, by cultivation on concave slides; the comma-like bacilli were found in all, without an exception.

This result, taken together with that obtained in Egypt, justifies the conclusion that this kind of bacterium uniformly occurs in the cholera bowel.

With the view of controlling the result, there were examined in exactly the same manner twenty-eight other cadavers (including eleven dead from dysentery), and also the evacuations of a case of simple diarrhoea, of dysentery, and of a healthy patient who had recovered from cholera, besides various animals, both healthy ones and others which had died of ulceration of the bowel and pneumonia; and lastly, we also examined water contaminated with putrid masses. In not a single case, however, did we succeed in demonstrating the cholera bacilli, either in the stomach or bowel of the cadavers, or in the evacuations, or in the other fluids, rich as they were in bacteria. As a disease process very similar to cholera is produced by poisoning with arsenic, an animal so poisoned was examined to see if the comma-bacilli were present in the digestive organs, but in this case also the result was negative.

From these results the further conclusion may be drawn, that the comma-like bacilli are altogether peculiar to cholera.

As to the relation of these bacteria to cholera, I have already explained in a previous report, that either this specific kind of bacterium is specially favored in its growth by the cholera process, and hence combined in such a striking way with cholera; or that the bacteria are the cause of cholera, and the disease only arises when these specific organisms have found their way into the bowel. The first hypothesis cannot be accepted for the following reasons: It must be assumed that a man, when he sickens with cholera, has already this kind of bacterium in his alimentary canal, and further, inasmuch as these peculiar bacteria were found without exception in a comparatively large number of cases both in Egypt and in India, two widely separated countries, it follows that every man must be tenanted by them. This, however, cannot be the case, for as already stated, the comma-like bacilli have never been found except in cases of cholera. Even in bowel affections such as dysentery and enteric catarrh, which so often pass on into cholera, they were absent. It is also to be remarked that if these bacteria had been so regularly present in human bodies, they certainly would have been previously observed at some time or other, which is not the case. As, therefore, the growth of these bacteria in the bowel cannot be produced by cholera, there remains only the second hypothesis, that they are the cause of cholera. That this is indeed the case, a number of other facts attest in an unmistakable manner; above all, their behavior during the disease process. They confine themselves to the organ which is the seat of the disease, the bowel. In vomit they have only been twice recognized, and in both cases the appearance and the alkaline reaction of the vomited fluid have proved that bowel contents, and with them the bacteria, have obtained access to the stomach. In the bowel itself they conduct themselves as follows: In the first evacuations of patients, and as long as these retain their fecal character, only very few cholera bacilli are found; the subsequent watery inodorous evacuations, however, contain them in great numbers, all the other forms of bacteria almost completely disappearing from that moment, so that at this stage of the disease, the cholera bacilli form in the bowel almost a pure cultivation. As soon, however, as the attack of cholera subsides, and the evacuations again become fecal, the comma-like bacteria gradually disappear from the evacuations, and when the disease has completely passed over, are no more to be found. What is found in cholera cadavers is exactly similar. No cholera bacilli are met with in the stomach. The bowel contains them in varying numbers, according as death has occurred during the cholera attack, or after it. In the most recent cases—in which the bowel presents a uniform bright red color—the mucous membrane is still free

from extravasations of blood, and the contents of the bowel consist of a whitish inodorous fluid; the cholera bacilli are found in the bowel in enormous quantities, and almost pure. Their distribution corresponds quite accurately to the degree and extension of the inflammatory irritation of the mucous membrane, while in the upper part of the bowel they are not usually so numerous, but increase towards the lower portion of the small intestine. If, on the other hand, death occurs later on, we find the signs of a considerable reaction in the bowel. The mucous membrane is of a dark color; in the lower part of the small intestine it is covered with blood extravasations, and its most superficial layers have often ulcerated away. The contents of the bowel are in this case more or less blood-stained, and in consequence of renewed development of putrefactive bacteria, are putrid in character and offensive. The cholera bacteria in this stage do not reappear in the contents of the bowel, but they are still present in considerable numbers for some time longer in the tubular glands, and often also in the neighboring tissues, a fact to which attention was first called by the appearance of the peculiar bacteria in the bowel of the Egyptian cholera cases. They are entirely absent only in those cases which die from some sequela, when the cholera attack has quite passed off.

The cholera bacteria behave, then, exactly like all other pathogenic bacteria. They appear exclusively in their own peculiar illness, their first appearance coinciding with the commencement of the disease; they increase in number proportionally to the advance of the disease, and disappear with its decline. Their seat corresponds in like manner with the extension of the disease process, and their number is, at the height of the disease, so considerable as to be quite sufficient to explain their destructive influence upon the mucous membrane of the bowel. It would certainly be very desirable to succeed in producing in animals artificially, with these bacteria, a disease analogous to cholera, so that their causal relation to cholera might receive ocular demonstration. In this, however, we have not yet succeeded, and it is even questionable, whether success will ever be attained in this direction, because, according to all appearances, animals are insusceptible of cholera infection. If any species of animal, whatever, could take the cholera, it would surely have been observed in a reliable manner in Bengal, where the infective material of cholera is met with throughout the year, and throughout the land. All inquiries, however, directed to this point have met with a negative result. Nevertheless, the demonstrative force of the facts given above is not weakened by the failure of the experiments on animals. The same phenomenon meets us, also, in other infective diseases; for instance, in enteric fever and in leprosy, two diseases in which specific bacteria also occur, but which hitherto

no one has succeeded in conveying to animals; and yet the mode of appearance of the bacteria in these diseases is such, that they must undoubtedly be regarded as the cause of the disease. The same is true also of the cholera bacteria. Moreover, the further study of the cholera bacteria has enabled us to recognize several other characteristics, which are all in harmony with what is known about the etiology of cholera, and thus must be regarded as an additional confirmation of the correctness of the hypothesis that the bacilli are the cause of cholera. The most remarkable circumstance relative to this, is the fact that it has been repeatedly observed that when the linen of cholera patients, after being soiled by their dejections, has been kept for twenty-four hours in a moist state, the cholera bacilli are found to have multiplied in a most extraordinary manner. This will account for the well-known fact, that the linen of cholera patients has so often infected those persons who have to do with it. Attention having been called to this observation, further experiments were made, and it was found that the same phenomenon occurred whenever cholera dejections, or intestinal contents of cholera cadavers, were spread upon linen or blotting paper, kept moist, and especially upon the surface of damp soil. In twenty-four hours the thin film of mucus was invariably found to be completely converted into a thick mass of cholera bacilli.

Another very important quality of cholera bacteria is that they die off after drying more quickly than almost any other form of bacteria. As a rule, even after three hours drying, every vestige of life has disappeared.

Another peculiarity is that they will only grow in alkaline cultivation fluids, even a very small quantity of free acids, which would have no tangible effects on the growth of other bacteria, delaying their development in a striking manner. In the healthy stomach they perish, which will account for the fact that over and over again it has been found impossible to detect them in the stomach or intestines of animals, which had been fed for a considerable period on cholera bacilli, and then killed. This last characteristic, together with their slight power of resisting drying, explains what daily experience teaches us, namely, that infection so seldom follows upon direct contact with cholera patients or their ejecta. Evidently other peculiar circumstances must be present in order that the bacilli may be placed in a position to pass through the stomach, and then to produce the cholera processes in the bowel. Possibly, bacilli can pass uninjured through the stomach, when digestion is disturbed, a hypothesis supported by what is seen in all cholera epidemics, and uniformly noted here in India, namely, that those men are especially liable to cholera, who are suffering from indigestion. Perhaps, however, some special condition under which these bacteria may occur, and which would

be analogous to the persistent condition (Dauersustand) of other bacteria, may enable the cholera bacteria to pass the stomach uninjured. It is not probable, it is true, that this change consists in the production of persistent spores, for such spores have been found to retain life for months and even years, whereas the cholera poison does not remain active longer than about three to four weeks. Nevertheless, it is quite conceivable, that some other form of persistent condition exists, in which the bacilli can remain for some weeks alive in a dried state, and in which they are also in a position to resist the destructive influence of gastric digestion. The conversion into such a state would then correspond to what Pettenkofer has described as the maturing of the infective matter of cholera. Hitherto we have not succeeded in discovering such a persistent state on the part of the cholera bacilli.

CONDENSATIONS.

THE treatment of epilepsy is summarized by Dr. Robert Lambe in an article on the subject as follows: (1) The value of combining bromide of salts with each other (sodium, ammonium, potassium, lithium and camphor) and with digitalis; (2) the value of zinc and cannabis indica as adjuvants to the bromide; (3) the use of borax in some cases which resists the bromide; (4) the employment of caffeine or theine and nitroglycerine in the treatment of epileptic vertigo.—*Journal of Nervous and Mental Diseases.*

AURI ET SODII CHLORIDUM.—The pure salt is composed of equal parts of chloride of gold and chloride of sodium. It is soluble in water, it promotes glandular secretions, and the elimination of waste products by increasing the capillary and arterial circulation. Its administration is indicated in disease produced and characterized by inactivity of function, due to a retarded or enfeebled circulation in the organ, a valuable remedy then in indigestion and constipation. It is used with benefit in headache and melancholia, when due to disturbances in digestion and elimination. When the functions of the brain are depressed, the mental activity diminished from the continuous use of alcohol and narcotics, the chloride of gold and sodium is administered with benefit.

THE following suggestion and personal experience on blistering was sent to the *British Medical Journal*, by Samuel Stratton, M. R. C. S.: Valuable as blisters are in the treatment of various diseased conditions, it must be admitted that their application is often avoided on account of the pain and distress they cause the patient, not only during active rising but at

each subsequent dressing, when, to say nothing of the attending discomfort and fatigue, absolute fainting occurs. In an illness about fifteen years ago, I myself, suffered considerable distress following the application of a large blister (which no doubt was instrumental in saving my life); but since that time I have never directed a similar torture for others, though I obtain satisfactory results from the blistering process I do employ. I direct the surface requiring such counter-irritation to be well covered with annular blisters about the size of the human iris, cut from vesicating tissue with an ordinary gun-punch, the center being extracted with a punch of small size. Once secure to the surface, and covered with cotton-wool and bandage, these blisters require no further attention. The discomfort created is so slight that I never meet with the slightest resistance to their application.

DR. ALEX. F. SAMUELS reports in the *New York Medical Journal* a case of obstinate ring-worm, which, resisting all known medicaments, readily succumbed to the Faradic current, when applied empirically, as a last resort. The handle of the positive pole was placed at the end of the elbow, and the flat electrode of the negative pole was passed repeatedly over the site of the ring-worm. The itching, which has been intense, ceased immediately and a clear exudation appeared on the surface of the skin. A second application, two days after the first, left nothing but desquamated epidermis over the seat of the disease. Upon the above result, the *Louisville Medical News* comments as follows: "The above is certainly novel, and if competent to destroy other parasites, that of favus, for instance, will prove to be a most valuable therapeutic measure. As a result of analogical reasoning, it is strange that the discovery was not made long ago. Indeed it would seem scarcely possible that the modern medical philosopher could witness in his rural rounds the blasted tree which so often meets his eye,

'Not the hoar emblem of decay,
But wreck of lightning's wrathful play,'

without turning from the macrocosm to the microcosm; and, sagely musing upon the mighty oak, riven and withered to the root under the stroke of the thunder-bolt, see in his mind's eye the trichophyton torn from its native heath, and blasted on an epidermic strand, while, Jove-like, he hurls his lightnings down upon the fated protophyte as the crank of the Faradic battery whirls round and round at facile fancy's touch. What a pity that such a discovery should have been made in so unpoetical and unphilosophical a way."

THE ex-Chancellor of the Duchy of Lancaster, the Right Honorable John Bright, of England, has published a letter which shows clearly that he has joined the rank of the anti-

vaccinationists. He is not as strong against the practice of vaccination as against its enforcement, which he characterizes as "a monstrous violation of the freedom of our homes and the rights of families." Many individuals with doubtless equal intelligence and honesty of conviction fail, like Mr. Bright, to recognize that freedom and rights must conform to law. A much larger class, not caring to be honest, feel that any law is unjust that is in opposition to their thoughts, fancy or convenience. This latter class are always feeling themselves aggrieved. This antagonism to law is particularly manifest when the law aims to suppress or control habits of life, or methods of conducting business. With this class any argument or persuasion is useless. They do not want to be convinced, or will not be controlled by their convictions. The false notion, that it is trampling upon personal liberty to enact laws governing mode and habit in living, is the greatest obstacle against which sanitary and health boards have to contend. That element in mankind which encourages each individual to feel that he will be more fortunate than his neighbor, influences him to neglect or avoid immediate inconveniences and "chance" escaping the remote danger. This class cannot be made to see the great future benefits of certain prophylactic measures, if those measures in any way interpose with their present comfort. Hence when it is known beyond peradventure, or even when there is strong evidence that a procedure does prevent or mitigate disease, such procedure should be carried out even if it does conflict with narrow prejudiced opposition. The protection resulting from vaccination to prevent small-pox, and quarantine measures to guard against the spread of all contagious diseases, cannot be estimated. It is easy, however, to see the fearful results, and the devastation humanity suffered, when these safeguards are not employed.

NEW PUBLICATIONS.

ELEMENTS OF HUMAN PHYSIOLOGY. By Henry Power, M. D., F. R. C. S., Ophthalmic Surgeon to Saint Bartholomew's Hospital, London; Examiner in the Board of Anatomy and Physiology, Royal College of Surgeons. One volume; 12mo.; cloth; nearly 400 pages. Henry C. Lea's Son & Co., Philadelphia.

This small work was prepared more for the medical student while in attendance at lectures than for the practitioner. Its object is to give the student a general outline of human physiology. It is one of a series of five. The complementary volumes treat on many subjects that are usually found in textbooks of physiology, which are consequently omitted in this work. The subject-matter is given in a clear, condensed manner, and when used with a more complete work on the subject

will be found quite useful. It must meet with the one general criticism which is justly made against all small compends, that the student is apt to memorize the contents and neglect studying the more extended manuals on the subject.

The text is illustrated with forty-seven engravings. The material and press-work and binding are of that superior quality that characterize all the work of this popular medical publishing house.

SEXUAL NEURASTHENIA. By George M. Beard, A. M., M. D., formerly Lecturer on Nervous Diseases in the University of the City of New York; Fellow of the New York Academy of Medicine; Member of the New York and King's Counties Medical Societies, of the American Medical Association, of the American Neurological Association; Author of "Our Home Physician," "Hay Fever," "Stimulants and Narcotics," "Eating and Drinking," one of the Authors of "Medical and Surgical Electricity," etc., etc. Edited by A. D. Rockwell, A. M., M. D. One Volume; 270 pages; 8vo. Price, \$2.00. E. B. Treat, 757 Broadway, New York.

In editing the posthumous manuscript of Dr. Beard on "Sexual Neurasthenia," Dr. Rockwell has given to the public some very bold, honest thoughts, and conclusions drawn from them, which, from the fact that they are original, are in opposition to the opinions of many. In his preface the editor states that to Dr. Beard "more than to any other is due the credit of having first described, under the head of 'Neurasthenia,' a congeries of symptoms, which has simplified the treatment of such cases, and ought to do much toward the relief of a large class of suffering humanity."

In the introduction, Dr. Beard states the philosophy of the work. It is formulated under four heads: (1) The theory that is a clinical variety of neurasthenia to which the term of *sexual neurasthenia* may properly be applied. This variety, while it is often involved as cause or effect, exists coincident with other forms of neurasthenia; namely, exhaustion of the brain, of the spine of the stomach and digestive system, it should be distinguished from them just as general nerve exhaustion is discriminated from hysteria, simple hypochondria, insanity, with all of which it had formerly been confounded. (2) The local conditions of genital debility in the male; impotence and spermatorrhœa, prostatic catarrh, which are generally described as diseases by themselves are regarded but symptoms, and are philosophically and clinically analyzed as such. The passive congestion of the prostate, irritable prostate with prostatic catarrh, are considered as analogous to nervous dyspepsia and gastric catarrh. (3) The causation of sexual exhaustion is not simple or single, but as of other clinical varieties, it is complex; civilization, the one great predisposing cause, is assisted by evil habits, excess-

ses, tobacco, alcohol, worry and special excitements, and even climate itself. (4) The treatment must conform to the causes, it must be complex, a union of local and general medication, and not by any one drug or prescription. The treatment of any one symptom, or special condition, as impotence, oxaluria, spinal hyperæmia, etc., or of any array of morbid fears or impulses, is unphilosophical and unsuccessful.

The following synopsis shows how logically and completely the subject is considered:

I—Nature and Varieties of Neurasthenia.—Neurasthenia a chronic functional disease of the nervous system.—May exist independent of other organic diseases.—Clinical varieties of neurasthenia.—Errors of text-books on nervous diseases.—Digestive, traumatic and hysterical neurasthenia.—The paradoxes of neurology.—The human body a reservoir of force.—The processes of exhaustion and supply.—Highly evolved (nervous).—Organizations have less resistance.—Americans the most nervous people of all history.

II—Evolution and Relation of the Sexual Sense.—This sense analogous to that of taste.—Subject to variations depending on the individual idiosyncrasies.—Local sexual debility.—The high scientific and practical interest of this subject.—Its frequency and complexity in the United States explained.—Three great centers of reflex irritation: The brain, the stomach and the genital system.

III—Relation of Neurasthenia to other Diseases.—To Malaria.—Syphilis.—Cystitis.—Organic diseases.—Constipation.—Hypochondriasis.—Sexual hypochondriasis.—Insanity in general.—Illustrative cases of false hypochondria.

IV—Sexual Hygiene.—Seminal emissions the effects as well as the causes of disease.—Acts differently with different constitutions.—Involuntary emissions in the married.—Treated by a combination of sedative and tonic measures that act upon the genital organs and the nervous system.—True spermatorrhœa.—Symptoms of genuine impotence.—Its treatment.—Conjugal hygiene.—Excess in intercourse a relative term, as in eating and drinking.—Functional and not organic diseases caused by sexual excesses.

V—Diagnosis and Prognosis.—Means and appliances for determining the nature of the disease.—Different phases of functional diseases.—Marrying and not marrying.—The children of sexual neurasthenics.

VI—Illustrative Cases.—Symptoms indicated in forty-three illustrative cases.—Vertigo and palpitation of the heart.—Mental depression and defective memory.—Nervous troubles from sexual debility.—Relaxed and congested condition of the prostatic region of the urethra.—Distressing mental irritability.—Nervous symptoms affecting the testicle and bladder.—Neurasthenia caused by genito-urinary complications.—Evidences

of brain and spinal cord disturbances.—Sexual neurasthenia in women.—Symptoms not indicative of sex except ovarian tenderness and scanty menstruation.—Ovarian and womb troubles produce sexual neurasthenia.

VII.—Treatment of Sexual Neurasthenia.—Change of treatment often needed.—Work, systematic and persistent a remedial force.—General sedatives and tonics.—Substitutes for bromides.—Mental therapeutics.—Local treatment.—Local bath and douches.—Rectal treatment.—Circumcision.—Cases requiring a combination of medical and surgical treatment.—Assurances that this disease is relievab and curable.

VIII.—Diet for the Nervous.—The theory of evolution as applied to diet.—Food best for nervous invalids.—Relative value of meats, eggs, milk, fish, fruits and vegetables. The character of a people depend upon their food.—The relation of starches and sugar to digestive fermentation.

PER-OXIDE OF HYDROGEN IN SUPPURATIVE CONJUNCTIVITIS AND MASTOID ABSCESS, WITH REPORT OF TWO CASES. By A. E. Prince, M. D., of Jacksonville, Illinois. Reprint from *Saint Louis Medical and Surgical Reporter*.

In this paper is set forth the merits of per-oxide of hydrogen as a cleansing agent in suppurative cavities, and its great value in the treatment of the two special conditions above named.

In such cavities as alveolar abscesses, suppuration of the antrum, and of the mastoid cells, this agent is marvelously successful. In these cases its efficacy exists in a peculiar power possessed by pus of decomposing the fluid, and liberating the oxygen. The gas being set free in the cavity it permeates all the recesses, and drives out the contents. That which may not be thus removed is rendered antiseptic. The results obtained by simply injecting this agent in such cavities is very wonderful.

The results obtained in the two cases reported in the article clearly demonstrate the important place which per-oxide of hydrogen fills in ocular and aural therapeutics.

SOME RECENT PROGRESS IN DISEASES OF THE NERVOUS SYSTEM. By Talbot Jones, M. D., of Saint Paul. Reprint from the *Alienist and Neurologist* of the report as Chairman of the Committee on Diseases of the Nervous System to the Minnesota State Medical Society of 1883.

The paper makes a review of the advances made in medicine, but more particularly the success that has been met by investigators of the diseases of the nervous system.

Attention is called to the advance made in the pathology of those diseases, which are attended by rapid wasting of the muscles; in *progressive muscular atrophy* in the adult and of

infantile paralysis; localization of central lesions, the insight of physiological experiments in comparative physiology. The importance of the advance made and the success of the investigators in *cerebral syphilis*, the author regards the most beneficent and brilliant in the present epoch of discoveries. The pathology of the various lesions is given with the diagnostic distinctions.

BOOKS RECEIVED.

YEAR-BOOKS OF MEDICAL PROGRESS: A Year-Book of Surgery for 1883. Edited by Charles K. Knight, M. D. G. P. Putnam's Sons, New York.

YEAR-BOOKS OF MEDICAL PROGRESS: A Year-Book of Therapeutics for 1883. Edited by Royal W. Amidon, M. D. G. P. Putnam's Sons, New York.

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MEDICAL DIGEST.

JEQUIRITY (ABRUS PRECATORIUS).

Under the title "Le Jequirity, Son Emploi en Ophtalmologie," M. L. A. Chawzeix has written a thesis, describing the habitat, parts to be employed, and method of preparation of the drug, the indications for its use, and its action on the conjunctiva and corneæ. He gives, in detail, fifty cases from M. de Wecker's clinic, in Paris, in which most gratifying results have been obtained, and warmly advocates its use in all cases of true trachoma and pannus.

De Wecker, the first in Europe to use jequirity, had his attention drawn to it by a patient, who, while in Brazil, was cured of a severe case of granular inflammation of the lids, by the remedy, which, in that country, is in common use. This patient sent a sample, with directions for its use, to de Wecker, who made a series of tests in his clinic, with the most happy results. He presented an account of his first experiences in *Annales d'Ophtalmologie*, August, 1882. Others began experimenting with this *prodigieux remède*, and, to-day, European ophthalmologists, with few exceptions, are strongly in favor of it, and consider that a great advance has been made in ocular therapeutics. Failures or bad results have been due either to error in the strength of the infusion, or to its employment in cases where it was contra-indicated.

After many observations, de Wecker finally settled upon the following method of procedure in his clinic: The first operation consists in splitting the bean and removing the epidermis, by allowing it to soak twenty or thirty minutes in warm water. Six, nine, or fifteen grams of the grain, being thus deprived of its cortical portion, are macerated for twenty-four hours in three hundred grams of cold water. This liquid, so obtained, is to be filtered and immediately applied. The three per cent. solution is the strength usually employed, but the five per cent. may be substituted when a rapidly developed and intense inflammation is desired. A piece of absorbent cotton, wrapped around a match stick, or a camel's hair pencil, is dipped into this solution and applied to the inverted lids, two or three times, at intervals of ten minutes. One such treatment is usually sufficient to produce an inflammation of requisite intensity, but if, at the expiration of twenty-four hours it has not reached the necessary degree, a second and even a third application, on the following day, may be made.

The indications for its use can be best shown by a translation of a paragraph of the thesis:

"It is especially in battling with true granulations, with trachoma, and its frequent and unhappy complications—pan-

nus, ulcer and abscess of the cornea—that the infusion of jequirity, methodically employed, gives excellent results. Applied in cases of follicular conjunctivitis, with hypertrophied papilla, the treatment is absolutely useless.”

It is in just these cases of ulcerated cornea, when the animal inoculation (gonorrhœa) cannot safely be applied, that the jequirity is to be recommended. It also possesses the advantage that the patient is entirely free from danger of infection. The ophthalmia produced by jequirity begins to make its appearance about three hours after the application, and steadily increases for twelve to twenty-four hours. When it has become intense, the lids, especially the upper, are much swollen, tense and painful to the touch, adherent along the edges, and bathed with a profuse, purulent secretion. The patient experiences great difficulty in opening his eyes; the palpebral conjunctiva is covered with a false membrane, thick, and strongly adherent, like that of conjunctivitis crouposa. On the second or third day the membrane may be removed in one piece with the forceps, but on the following day begins to be reproduced. The conjunctiva of the eyeball is yellowish in color and slightly chemosed. The inflammation may reach such a degree that the neighboring glands are involved, and, spreading to the mucous membrane of the nose, cause a more or less intense coryza. The general symptoms are slight, and consist of light fever, headache, constipation, anorexia, etc. In eight days the maximum is reached and the inflammation gradually subsides until, in two or three weeks, the entire attack has passed away.

Complications.—Cases have been recorded where it was said that the jequirity produced abscess and perforating ulcer of the cornea. This might readily occur where the strength of the infusion was too great, or the vehicle with which the powdered bean was combined (vaseline) was impure, or a sufficient interval of time between applications had not elapsed.

Mode of Action.—It was for a time uncertain whether the action of jequirity was due to its chemical properties or to a micro-organism, and, in order to settle the point, numerous experiments were undertaken. The evidence is incontestably in favor of a micro-organism, the “bacillus of jequirity.”

Sattler sums up the result of his study as follows: (1) The infusion of jequirity contains a bacillus of a special kind, which is found in the ophthalmia, infiltrated through the conjunctiva, in the secretion, and in the false membrane; (2) The infusion, deprived of its bacillus, is absolutely inactive; (3) The cultivated product of this bacillus, transplanted to a conjunctiva, always develops an “ophthalmia jequiritique.”

Chawzeix draws the following conclusions: (1) Jequirity, applied in infusion, to the conjunctiva, provokes, in twenty-four hours, a purulent ophthalmia of a croupous nature;

(2) The intensity of the artificial ophthalmia thus produced, is in proportion to the strength of the infusion and the number of applications; (3) The inflammatory phenomena disappear of themselves in eight to fifteen days, *without the slightest danger to the cornea*; (4) The ophthalmia jequiritique, is an ophthalmia *sui generis*, easily distinguished by its course and symptoms; (5) Jequirity rapidly cures trachoma and the pannus which accompanies it; (6) It is employed also with success in the treatment of scrofulous pannus, and scrofulous abscesses and ulcers of the cornea; (7) It is contra-indicated in papillary hypertrophy and follicular conjunctivitis, since in these affections it is always without curative effect, and may be noxious; (8) Its curative action is due to a micro-organism—a special kind of bacillus—and not to a chemical principal.—H. F. Hansell, in the *Polyclinic*.

ACUTE GONORRHOEAL RHEUMATISM.

In a paper on this subject in "Guy's Hospital Reports," Volume XLI, Mr. J. N. C. Davies-Colley suggests that there are several distinct affections confused together under the name gonorrhœal rheumatism, which he enumerates as follows:

(1) *Gonorrhœal Synovitis*.—A chronic affection occurring in the male, generally in the knee-joint. Very rarely it is acute, and goes on to suppuration.

(2) *Gonorrhœal Arthritis*.—An acute affection, occurring in the female quite as often as in the male; as a rule, attacking, at the outset, several joints, and afterwards confined to one, most frequently the elbow-joint, affecting especially the fibrous tissues of the joint, and only secondarily the synovial membrane and cartilages.

(3) *Gonorrhœal Inflammation of Fibrous Structures not Connected with the Joints*.—For example, the plantar fascia, sclerotic, iris, the pericardium and endocardium; this gonorrhœal inflammation of the plantar fascia sometimes occurs in the acute form. Inflammation of the first three structures usually occurs in connection with chronic gonorrhœal synovitis. In the last two situations inflammations seem to be generally associated with gonorrhœal arthritis.

With regard to the second class, he says: (1) It usually occurs during the acute stage of gonorrhœa, or some purulent discharge from the genital organs in adult patients under middle age. (2) It occurs as often in females as in males, if not more often. Of twelve cases recorded by the writer, nine were females. (3) It may attack any joint, but most often the elbow-joint. Eight of the writer's twelve cases were in the elbow. (4) At first it attacks several joints, like acute rheumatism, and then confines itself, as a rule, to one. (5) Its seat is the fibrous tissue of the joint. There are great œdema,

redness, pain and tenderness. The ligaments are softened and the cartilage may be disorganized. There is but little synovial diffusion, and constitutional disturbance is but slight. (6) It may be confounded at first with acute rheumatism, later on with phlegmonous erysipelas, bursitis, lymphangitis, phlebitis, gout and pulpy disease of the synovial membrane. (7) It rarely, if ever, suppurates, but is especially prone to set up fibrous ankylosis. (8) The best treatment is to cure the discharge, keep the joint perfectly still, and apply uniform pressure as long as the acute stage lasts, and then to use passive motion.—*Practitioner.*

APOMORPHIA IN INFANTILE CONVULSIONS.

Dr. Edward Cotterell, in the *Medical Press and Circular*, reports the following: "On November 11, 1883, I received a summons requesting my immediate attendance on a child in a fit. Upon my arrival I found the patient, a child aged eighteen months, suffering from typical infantile convulsions. The mother stated that the child was attacked about half an hour after its dinner, which, upon inquiry, I found consisted principally of greens and potatoes. The attack was preceded by vomiting. There was a great congestion of the veins of the neck, and the breathing was stertorous. I immediately proceeded to use artificial respiration by the Marshall Hall method, and, after about five minutes, the breathing became less stertorous, and the cyanosis less. I thought it would be a good plan to evacuate the contents of the stomach, in spite of the mother's assurance that the child had returned all its dinner, and failing to produce reflex vomiting by irritation of the fauces, I procured some apomorphia. I administered two minims of a two per cent. solution of this drug subcutaneously, and, in one hundred seconds, the stomach evacuated its contents—a prodigious quantity—with hardly any effort. Immediately after this the convulsions ceased and the child became quite conscious, nor has it subsequently had any attacks of a like nature.

"I am not aware of apomorphia having been used before in the treatment of infantile convulsions, and my experience of this treatment up to the present rests upon this single case, but the result was so gratifying that I am persuaded to publish it, being confident that in apomorphia we have a drug capable of controlling the fits, when these are due to gastric irritation; and I am sure that a very large proportion of infantile convulsions—at any rate, those occurring among the children of the poor—are due to injudicious feeding. Another recommendation in favor of the use of a hypodermic injection of apomorphia in this disease is the ease with which it can be administered."

CHLOROFORM VERSUS TOBACCO IN STRYCHNIA-POISONING.

In taking exception to the use of tobacco in the treatment of a case of strychnia-poisoning, published in the *Philadelphia Medical Times*, February 23, 1884, Dr. Francis L. Haynes communicates the following to a later number of the same journal:

It has been well established by published cases and experiments, that tobacco, though a powerful emetic, is not a true antagonist to strychnia. It should not be used in strychnia-poisoning, for the following reasons: (1) Tobacco, taken by human beings may produce convulsions and death; (2) Nicotine produces convulsions in the lower animals; (3) Animals that have recovered from doses of nicotine and strychnia, given at separate periods may be killed by the same doses given together, showing that they aid, instead of antagonizing each other; (4) Chloroform and chloral are certainly the most efficient remedies yet proposed for strychnia-poisoning. In severe cases, where it is impossible, on account of the firm contraction of the muscles of the jaws, to use internal medication, chloroform may be used by inhalation, or chloral by enema, where otherwise the physician would be powerless. Chloroform, in such severe cases, is by far the better remedy, as chloral is very apt to be rejected by the rectum.

THE DIGITALIS GROUP.

At a recent meeting of the Royal Medical and Chirurgical Society, of London, a paper was contributed by Drs. Ringer and Samsbury, containing some investigations into the action of the digitalis group, the following abstract of which is taken from the *Medical Times*:

Digitalis is taken as the type of a group of drugs whose influence is exerted mainly on the circulatory system. The facts of chief importance in this action are: (1) The arrest of the heart in systole (if the dose be sufficiently large); (2) The raised blood-pressure which obtains throughout till close upon the final systolic arrest. Whilst the spasm of the heart is universally recognized as the result of the digitalis action, and as caused by direct action of the drug on the cardiac tissue, there is doubt both as to the condition of the arterioles under the influence of the drug, and as to whether the influence be direct or indirect. Digitalis action upon the heart may be defined as the production of continuous spasm of the heart-muscle by direct action of the drug upon this tissue. It is pointed out that this spasm must not be of the nature of a tetanus—that is, of a fusion of adjacent beats; and, further, that it may affect either the whole heart or a limited portion of the same, according as the drug is applied to the whole heart or to a limited portion. Thus defined, the already very large group of bodies classed by

Schmiedeberg under the heading digitalis, becomes yet larger, and will include among others, the caustic alkalies and barium salts.

Experiments are recorded in which an artificial saline solution was circulated through the vessels of the hinder extremities of a tortoise whose brain and spinal cord had been completely destroyed. The experiments were so arranged that the rate of flow could be measured, and so soon as a uniform rate of flow had been established, the drug was added to the circulating fluid. The results obtained with digitalis were both uniform and striking: invariably on the addition of the drug, the circulation became slowed, even to the extent of almost complete stasis. Similar experiments were made with the following members of the digitalis group; strophanthus, dyak poison, convallamarin and scillitine. In the case of each of these drugs evidence of constriction of the vessels was obtained in the shape of a slowed circulation. Digitaline, however, ranked as by far the most active of the series. Similar experiments were made with hydrate of potassium, and with the carbonates of potassium and sodium, and sodium bicarbonate, which, with the exception of the latter, gave like evidence of constriction of the arterioles. Experiments carried on simultaneously with the above on the excised frog heart, showed, in the case of each of the above drugs, the production of more or less persistent spasm, with the notable exception, however, of sodium bicarbonate, which gave none. Experiments then followed which sought to determine whether the calibre of the vessels, in addition to being directly influenced by these drugs, could be affected by them through the nerves. Digitaline was alone experimented with. The results were purely negative. Finally, to meet the suggestion as to the action of the drugs on the skeletal muscles, experiments were made with frogs, given quantities of solutions of digitaline, strophanthus, dyak, scillitine, barium chloride, and caustic potash and soda being injected. The results showed the first five to be notable muscle poisons, the muscles rapidly dying and losing their excitability; indeed, even before the death of the animal, a very marked diminution of muscular irritability was in several cases observed. Comparing the actions among each other, it was noted that strophanthus and dyak poisons acted much more powerfully on the skeletal muscles than did digitaline. To sum up, the argument briefly stated, is as follows: Starting from the systolic digitalis heart, which is admittedly a result of direct action of the drug on the cardiac muscle, we have found: (1) That for the other members of the digitalis group here examined, a like action obtains; (2) We have suggested that the local action on the heart may serve as the definition of digitalis action; this accepted, we have pointed out that Schmiedeberg's already large group, must be still further enlarged; (3) Arguing from

this action on the muscular tissue of the heart, we have inferred that the action on the muscular tissue of the arterioles will be similar, an inference verified by actual experiment; (4) So far as our experiments go, we do not find that these drugs influence the calibre of the vessels indirectly through the nervous system; (5) We have pointed out that many of the digitalis group are notable muscle-poisons, and that the tissue of the heart, standing functionally midway between the striped and unstriped muscular tissues, may permit of the inference that a marked action of the drug on the tone of the heart would indicate a similar effect on the tone of the vessels, whereas a marked action on the cardiac beat would indicate like action on the skeletal muscles.

PROGNOSIS IN CASES OF MENTAL DISEASE.

Sankey (*Liverpool Medical Chirurgical Journal*, January, 1884) has tabulated the more important conditions which characterize the early stages of the incurable and curable forms of mental disease. The inquiry resolves itself into a determination as to (1) whether the case is one of general paralysis (incurable form), or (2) whether it represents an instance of ordinary insanity. By "ordinary" insanity is understood all curable forms of mental disease (except general paralysis).

The positive evidence bearing upon the question as to whether a given case of mental disease belongs in the category of curability or incurability, as above understood, may be broadly summarized as follows (when the attack is primary): (1) The mode of the invasion in ordinary insanity, in a primary attack, will be by melancholy. General paralysis, as a rule, commences by the opposite rather, as by hilarity, busy occupation, absurd conduct, garulity, and want of ordinary reticence on every subject. (2) In ordinary insanity, the emotions alone are affected, as by depression and grief, sense of wickedness, or being blame-worthy, morbid apprehension, as of ruin, injury, poison, loss of salvation, etc. In general paralysis all the faculties are in a state of exaltation, the emotions, the intellect and volitions being equally involved, and the conduct is wild and irrational. (3) In the melancholy of ordinary insanity the patient wishes for solitude. In general paralysis the patient rushes into all kinds of society. (4) In ordinary insanity the commencement of the symptoms is gradual, insidious, often obscure, and occurring in persons of quiet temperament. In general paralysis it follows very often upon some great mental shock, and almost suddenly, and occurs in persons of sanguine temperament and great activity of mind. The evidence contained in the history of the case should be examined both from a negative and positive stand-point.

As general paralysis is almost invariably fatal, it is evident

that there can be no true second attack. It should, however, be borne in mind that the disease is liable, under certain circumstances, to remission of all symptoms. Such a remission may last for several years, giving rise to the erroneous belief that the disease after all is not a case of general paralysis.

Where we have to do with a secondary attack of mental disease which has taken place after a period of apparently complete recovery, the probability of restoration is greater than in primary cases. At the same time, however, all things being equal, the prospect of a third and subsequent attack is greatly enhanced. This is particularly true where there is a persistence of the exciting cause, as in the puerperal condition. When the secondary attacks become progressively less severe the prospect of ultimate complete recovery is proportionately increased.—*New York Medical Journal*.

THREE CASES OF EMPYEMA, SHOWING THE ADVANTAGE OF INCISION AND DRAINAGE.

Dr. V. M. Reichard, of Fair Play, Maryland, communicates to the Philadelphia *Medical Times*, three cases of empyema, which occurred in the practice of his preceptor, Dr. J. McPherson Scott, of Hagerstown, Maryland.

Case I.—A girl aged six years after suffering from an attack of pleurisy with effusion, became hectic, with rigors and sweats. Decided bulging of intercostal spaces but no pointing. A good-sized trochar introduced and about a pint of pus drawn off. A drainage tube was inserted but it clogged and was removed. The opening closed, and in a week the chest was as full as ever. After local anæsthesia, an incision was made into the pleural sack and about three pints of pus evacuated. The opening was kept open with a tent. The discharge continued in diminishing quantity for three months when it ceased and the opening closed. Improvement was noticed immediately after the free incision.

Case II.—Male; colored; aged twenty. In a week following an attack of pleurisy with effusion, a gallon of offensive pus was drawn off with an aspirator. In ten days chest had refilled, but to defective working of the apparatus not more than a quart of pus was withdrawn. In a short time the effusion was so serious as to impede respiration. The pleural sac was freely laid open between the tenth and eleventh ribs. The case passed from under observation, for about one year. When he was seen again, the opening was closed but the patient died in a short time from consumption.

Case III.—Male; white; aged thirty-five. When seen in 1872 was suffering with an empyema. An opening had been made but failed to get pus. Respiration greatly impeded.

Would not submit to further operation. By means of a piece of rubber tubing and syringe several pints of pus were removed through existing opening, affording instant relief. Would not allow any further operations. In 1880 he had a hæmorrhage into the pus cavity. Was relieved by passing catheter into and washing the cavity. This relieved the discharge but would not cure it. Tubercles now began to develop in the lungs. In the spring of 1881 had another hæmorrhage into the sac. In December 1881 died of phthisis pulmonalis.

These cases present some points for study. They show that the best chance for recovery is after free incision, whether the case be one of suppurative pleurisy or one in which a serious effusion has become purulent the indication is the same—free incision. The pleural sac is simply a pus cavity and must be treated as such. In Case I improvement began as soon as free drainage was established. The child is now robust with very little retraction of the chest-wall. In Case II aspiration was given a fair chance but failed entirely. It is a fact observed with negroes that thoracic diseases are badly borne by them. Case III is another against aspiration. Though the pleural sac was often emptied and washed out, drainage was never fairly established, and at last the system succumbed to the purulent secretion.

It is of the first importance that the incision be made into the lowest part of the sac. In some subjects it is not an easy matter to find the lowest rib. In such cases a good plan would be to aspirate with the hypodermic syringe. Even if the needle were passed below the diaphragm no harm would result.

THE PROGNOSIS IN CASES OF POSTMORTEM WOUNDS.

Dr. W. Thornton Parker, of Morristown, New Jersey, writes:

The medical journals of this country and Europe have reported during the past year several deaths in the medical profession from postmortem wounds. Some of these deaths have occurred very soon after the receipt of the injury, others have weakened the system of the victim for years, until some ordinary disease has found him in a state to be easily overcome. I have in mind at present, two or three medical men, who are suffering constitutionally from postmortem wounds received several years ago. In looking up the matter in our text-books on surgery, I find too little of information concerning this subject. I supposed that it was generally admitted that the postmortem wound was injurious to health to such an extent that the virus having once sharply attacked the system, it would be well-nigh impossible to eradicate it. I am well aware that many postmortem wounds are received, and that little, if any, disturbance seems to have been created by them; but I hold that the system can be, and undoubtedly often is, seri-

ously impaired for life, the natural forces weakened, and the nervous system affected. Hamilton gives this matter very careful consideration, but omits the prognosis in such cases, and so do most of the writers to whose works I have access. The needle seems to be recognized as probably the most dangerous implement inflicting this dreadful wound.

My object in sending you this communication is to ask for information from the medical profession on this subject, especially concerning prognosis. During the past week, in conversation with a medical man of high standing, and a man well read in surgery, he informed me that after fifteen years he considered the poison to be so thoroughly eliminated from the system of any one receiving such a wound as to be practically non-existent; and furthermore he held that our bodies change so rapidly and continuously that little of the body fifteen years ago remains to-day. * * * * Early in 1882 this matter received considerable attention in the columns of the *British Medical Journal*, and one case, at least, was reported where the postmortem warts had persisted for fifteen years! (see *British Medical Journal*, February 10, 1883). If the warts can persist that length of time, the poison can continue its injurious effects as long and even longer, in my opinion, and, as I have reason to suppose, in the opinion of most medical men. I shall be grateful for practical information on this subject, and for reference to works or papers which sustain either view of the prognosis mentioned.—*New York Medical Record*.

CATARRH OF LARYNX.

"One of the most common causes of hoarseness," says Mr. Norton in the *Medical Press and Circular*, "is chronic catarrh of the larynx. The voice in this affection is not invariably hoarse but becomes so after fatigue or any exposure to wind, damp, or after singing or speaking. Chronic catarrh may be caused by damp atmosphere or damp residence, or by the over-use of the larynx, or by too powerful use of the larynx, as in clergymen and public speakers, or by the abuse of alcohol, or may be associated with the gout. It is extremely common in this country, and is very troublesome to the individual, on account of its effect on the voice and on account of the continuous desire to clear the throat which it causes. It is often quite local, though it may be accompanied by nasal or bronchial catarrh.

"*Symptoms*.—A constant desire to clear the throat of a viscid mucus which adheres to the cords, each attempt rather increasing than diminishing the desire. The voice is deep, and often breaks or is hoarse, especially in lecturing, preaching, or singing.

"With the aid of the laryngoscope, the cords are, as a rule, only slightly more vascular than normal, but shreds of mucus,

or pellets of thick, sticky green mucus occupy the larynx. This secretion prevents the voice being raised, and causes the desire to clear the throat.

"The treatment is, of course, to remove the cause, in which often lies a difficulty—whether it be climate, damp or clay-soil residence, public speaking, or the abuse of alcohol. It is better to avoid clearing the throat; it is better to speak through it and let the viscid mass separate itself. Efforts to displace it have little or no effect but to annoy the patient. Anti-catarrhal remedies should be adopted—warmth to the skin; entire covering of flannel should be worn and should not be put aside in hot weather though a thinner texture may be worn. Laryngeal catarrh in England is as common in winter as in summer, because of the careless exposure of the skin to changes of temperature. In male patients the growth of the beard may prove curative if the disease be limited to the larynx; if associated with nasal or bronchial catarrh, a pill of quinine, ipecac, opium or conium. Local applications of spray have, in my experience, proven of no avail. Astringent lozenges, rhatany, tannin, etc., which are given by many, in my opinion are more injurious than useful, for they constipate the bowels and do not touch the disease.

"Occasionally cases of this disease run on to a form in which the cords are quite discolored, the hoarseness most marked, perhaps complete aphonia, all attempts to speak being accompanied by extreme laryngeal fatigue. Such cases, though actually only a catarrh, are accompanied by infiltration far deeper than the mucus tissue and assume the character of chronic laryngitis. In these cases the occasional application of the brush with a strong solution of chloride of zinc or nitrate of silver is admissible, but I rely chiefly on galvanism.

"So far we have spoken of inflammation attacking the mucus membrane; if it attack the deeper tissues of the larynx, the disease is best expressed by the term laryngitis."

THE TREATMENT OF HABITUAL CONSTIPATION.

"I suppose," says Dr. F. P. Atkinson in the *Practitioner*, "there is no derangement of the system we are more frequently called upon to treat, than habitual constipation; and though all kinds of medicine are suggested for its relief, they rarely produce more than temporary benefit—and it is difficult to see how the result can well be otherwise, while the root of the evil remains untouched.

"Now, by far the more numerous subjects of this disorder are women; and as they do not seem to know that regularity is essential to the performance of every one of nature's operations, they appoint no stated times for trying to get the bowels relieved, but trust to receiving intimation when the rectal

accumulation and distention can be borne no longer. This method of action may, and does, act very well for a time; but nature gradually gets upset, the sensation of the lower bowel becomes blunted, and at last it ceases to respond to the ordinary stimulus. Then aperients are regularly resorted to, and though these act fairly well for a time, they gradually have to be increased in strength and frequency.

"Now, as regards the treatment, the first thing to be done is to get the rectum well relieved; the next, to get the actions to take place at fixed times; and lastly it is necessary to get more tone imparted to the muscular tissue of the bowels, so that the regularity of action may be helped and also maintained. In order, then, to get the bowels relieved in the first instance, it is as well to give five grains of both compound colocynth and compound rhubarb pill at bed-time (this rarely requires to be repeated), then to take a tumbler full of cold water the next morning on waking, and repeat it regularly at the same time each day. Should the bowels remain sluggish for some time, the same quantity of water may be taken daily before each meal. Supposing no action takes place on rising or shortly after, a small injection of warm water may be resorted to. After each movement of the bowels, a small hand-ball syringe of cold water should be thrown into the rectum and retained. A soup-plateful of oat-meal porridge (made with water and taken according to the Scotch method, namely, by filling half the spoon with hot porridge and the other with cold milk) each night at bed time, or even every night and morning for a time, is often a very great help. But above all things it is necessary for the patient to *try* and get relief at a certain *fixed* time regularly every day. If these directions are carried out in their entirety, the evil, even if it has been of long standing, will generally be corrected and the patient will improve in health and appearance. Of course, where the constipation results from exhaustion of the nervous system (such, for instance, as is brought about by self-abuse), the special cause has to be taken into consideration, and such treatment adopted as is suited to the particular necessities of the case."

TREATMENT OF WHOOPING-COUGH BY CROTON CHLORAL.

Dr. W. C. Webb, of Bryantsville, Kentucky (*American Practitioner*), has employed croton chloral in whooping-cough with much benefit. It does not derange the digestive organs, nor affect the vital nervous centres. Patients frequently fall asleep on their chairs after using it. On taking this remedy the patient must be watched lest toxic symptoms be manifested. A child from one to two years old may take one grain of the preparation every four hours. One ten years old may take two grains as often. After the first week the dose should be less.

sened and given at longer intervals. Should there be much gastric irritability, or should the paroxysm be very severe, a few whiffs of chloroform may be given in advance of the croton chloral. This may be repeated only three or four times.

The following formulæ are given for its administration :

R. Croton chloral..... 3j.
Tinct. cardamon comp.,
Glycerin..... aa ʒij.

Sig. One-half teaspoonful every four hours for a child two years old and under.

Or,

R. Croton chloral..... 3j.
Tinct. belladon..... ʒij.
Tinct. cardamon comp..... ʒij.
Glycerin..... ʒij.

M. Sig. Dose: one-half teaspoonful.

—*Medical Summary.*

MISCELLANEOUS ITEMS.

NEVER give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine scanty.

ONE drop of tincture of belladonna, before each meal, taken in cold water, is said to overcome obstinate constipation.

PROFESSOR ALFRED STILLE has resigned from the faculty of the University of Pennsylvania after twenty years service.

VOLTAIRE's definition of a physician : One who introduces drugs of which he knows but little, into bodies of which he knows still less.

DR. GRABRIEL, of France, considers vomiting in an attack of diphtheria as a very grave symptom. Statistics collated establish his observations.

A ONE per cent. solution of sulphate of copper is recommended as a cheap and efficient substitute for carbolic acid or corrosive sublimate, as a disinfectant in obstetrical practice.

DR. JOHN HOMANS, of Harvard, has performed the operation of ovariectomy one hundred and fifty-nine times with only twenty-two deaths. The last thirty cases have all recovered.

SIMPLE inflammatory tonsillitis is cured by Dr. Houston by using eucalyptus. He dilutes one ounce of the fluid extract with a drachm of hot water, and has it used as a gargle or spray, every twenty minutes.

OIL OF CLOVES WITH CHLOROFORM.—Professor Nussbaum recommends a few drops of the oil of cloves to be dropped in the towel or apparatus used for the administration of chloroform in cases where the chloroform is *disagreeable*.

TREATMENT OF CHORDE BY SULPHATE OF QUININE.—Dr. J. B. Johnson observed, in a case of gonorrhœa, that chorde came on about the same hour every night. He prescribed small doses of quinine every three hours through the day, and, by the third day, the chorde had disappeared.

RULES IN TREATING CHILDREN.—A medical writer has wisely said: "One of the watchwords in treating children is elimination. Do not lock up the secretions. Give nature; that grand old mother, a chance. Very rarely should opium or any of its preparations or derivatives, be used in the treatment of children."

SYMPTOMS OF PREGNANCY—VAGINAL PULSE.—Professor Osterloh, of Dresden, in a lecture, stated that the earliest, never-failing symptom of pregnancy is the *vaginal pulse*. It is found to the right, left, and in the middle of the cervix. In healthy, non-pregnant women, it can only be felt when in a state of orgasm, but then all other symptoms of pregnancy are wanting. The Professor never found the vaginal pulse wanting in pregnancy.

EXCESSIVE DOSES OF MORPHIA—EIGHTY-FIVE GRAINS IN ONE DAY.—Dr. L. S. Hinkley, of Avon Springs, New York, reports (*New York Medical Journal*, page 354), a case of a morphia consumer, a woman, twenty-six years of age, who took twenty-five grains of sulphate of morphia, hypodermically, at one dose, in his presence, without narcotism. She stated that this was her daily dose, and at times she took two such doses in a day. She declared that she had taken as much as a drachm at night, and twenty-five grains in the morning, and had continued this quantity daily for nine days without any very marked effect.

ODOFORM SUPPOSITORIES FOR PILES.—The following recipe for suppositories for hæmorrhoids is from the *Zeitschrift für Therapie*:

R. Iodoform.....	4 parts.
Balsam peruv.....	8 parts.
Cacao butter, }	} of each..... 6 parts.
White wax, }	
Calcined magnesia.....	4 parts.

Mix. To make twelve suppositories. One to be introduced after stool each time.

—*Druggists' Circular*.

CASCARA SAGRADA IN INTERNAL HÆMORRHOIDS.—Dr. John Elfers, of Sugar Branch, Indiana, speaks very highly in the *Therapeutic Gazette*, for January, 1884, of his use of cascara sagrada in internal hæmorrhoids. Among the many cathartics which he has employed in this condition, this one is, par excellence, the best, while its protracted use, by relieving the cause to which the hæmorrhoids are largely traceable, contributes to a permanent cure. He strongly recommends the use of this drug in those cases where, either from reluctance on the part of the physician, or objection on the part of the patient, operative interference is not resorted to.

THE *Massachusetts Medical Journal* has the following to say concerning Tongaline: "We believe that we are conferring a favor upon subscribers in directing their attention to *Tongaline*, or *Liquor Tongæ Salicylatus*. It is a combination of the Figian Tonga, with some of the more powerful salicylates, and, as a remedy for neuralgia and rheumatism, has become a general necessity with those who have given it a fair trial, among whom are many eminent in the profession. Our own experience leads us to heartily recommend it, and our readers will note that it is not a secret medicine, and its sale is urged only through prescriptions of members of the profession."

LADY MEDICAL STUDENTS.—At the present time there are forty-five lady medical students in Paris, the great majority of whom are Slavs. At Liege the number has increased this year from five to twenty-six. In Switzerland there are sixty-eight, namely: seven at Geneva, thirty-three at Zurich, and twenty-eight at Bern; none studying at the Basle Faculty. Pretty well received in France, and thought but little of in Switzerland, lady medical students at Saint Petersburg, if not actually imprisoned, are compelled to board in a kind of barrack, under the superintendence of the authorities; so that it is not surprising that whenever they can, these medical aspirants resort to Paris, where they meet with a more liberal hospitality.—*Medical Times and Gazette*.

TRUE AND FALSE ANGINA PECTORIS.—The different forms of angina pectoris have been recently studied by Dr. Huchard, whose paper was read at a meeting of the Paris Académie de Médecine, held on January 8. The false form may be due to nervous reflex, or toxic changes, and generally ends in recovery; while the true form is caused by ischæmia of the cardiac muscle; in most cases, the coronary arteries are found diseased, or their opening in the aorta is narrowed by chronic endarteritis; lesions of the cardiac nerves are not frequent. M. Huchard thinks that true angina pectoris may end in recovery,

but much more rarely than the false form. For the treatment, he recommends nitrite of amyl, which acts more rapidly than injections of morphine, nitro-glycerine, and nitrite of sodium. He also strongly advises the iodide of sodium, given at a dose of sixteen and three-tenths grammes, daily, during several months.—*British Medical Journal*.

CONVENIENT WATER TEST.—Dr. E. Gregory commends the following test: Make a solution according to the following formula: Liquor potassæ, parts 70; aquæ distillatæ, parts 90; potassii permanganat, part 1, by weight. This solution is to be kept in a colored glass hydrocyanic acid vial with a glass stopper. In applying the test two test tubes are to be taken of about four inches in length by half an inch in diameter. These are each two-thirds filled, one with the water to be tested, and the other with some standard water of known good quality. Into each is dropped one minim of the test solution, and thoroughly mixed. The tubes are then to be stopped with cotton-wool and set aside in the rack with a piece of white paper behind them. The freedom of the water from organic impurity seems to be in direct proportion to the time it retains the pink color of the permanganate. A water of average good quality should keep its color well for forty-eight hours. If decidedly paler in twenty-four hours, it is not fit for use. A very slight precipitate occurs in good potable water.—*Druggists' Circular*.

ERGOT AS A PREVENTIVE OF THE AURAL TROUBLES OCCASIONED BY QUININE AND SALICYLATE OF SODA.—In three cases of acute articular rheumatism, Schilling has observed that the prolonged administration of salicylate of soda in doses of five and a half scruples—two and a half drachms a day, causes permanent aural trouble. The membrana tympani was thickened and of a cloudy aspect. A fourth case which, in two successive days, had taken single doses of thirty grains of sulphate of quinine, became subject to roaring in the ears and deafness. This is not an infrequent effect of quinine or the salicylates administered in large doses, and Schilling proposes to administer ergot with these drugs in order to prevent this vascular paralysis; for example, he gives the following:

R. Ergotine.....	grs. xv.
Salicylate of soda.....	ʒiiss.
Water.....	ʒvj.

S. A large spoonful every hour.

Of eighty-seven patients who have taken this prescription, three-fourths have had no aural symptoms, and the same was noticed in nine other patients who took quinine and ergotine in equal parts. This mixture will be equally preventive of the amblyopia which sometimes follows large doses of quinine.—*Iowa State Medical Reporter*.

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ORIGINAL ARTICLES.

TURPENTINE IN DIPHTHERIA.*

BY CONRAD GEORGE, M. D., ANN ARBOR, MICHIGAN.

It is not *pretended* that the following report of six cases of diphtheria constitutes an addition to our knowledge of this malady; it simply portrays those anomalous forms, where a grave constitutional disease does not apparently differ from the manifestations of a purely local affection of the same organs, and where its true character is so frequently learned only in its subsequent course, where, even in the onset, it seems to have acquired malignant virulence, having undergone, as it were, a natural retrograde cultivation under favorable conditions, obtaining at times in the mildest cases. But little value can be attached to the favorable effect of a medicine in a few cases, yet when such a result corroborates similar results obtained by others, it has a tendency to attract attention, and as but few reports have been made of the oil of turpentine in diphtheria, I consider the following cases not inappropriate for reporting.

Case I.—December 14, 1883, I was called to see Gracie Vreeland, a bright, well-nourished child of four and a half years. Since the previous day she had complained of some pain in her throat, had vomited repeatedly, and was later attacked by high fever. I found her with flushed face, skin hot and dry, fetid

* Read before the Michigan State Medical Society, at Grand Rapids, June 11, 1884.

breath. She complained of pain in her throat, an almost constant desire to swallow which act increased the pain. On inspection both tonsils were found greatly swollen, inflamed and several white patches noticed on each gland. The anterior pillars of the fauces, uvula, and soft palate were unusually red, but apparently not swollen. I regarded this as a case of tonsillitis, which disease prevailed at the time, and I had seen a number of cases which throughout their entire course had not caused any doubt as to diagnosis. I made a thorough application of bicarbonate of soda to tonsils, prescribed aconite, a laxative, and ordered a warm bath to be followed by sponge baths as necessary to reduce the high fever. On the following day the fever had subsided, the skin was moist, pulse full and soft. Her breath was greatly improved and she could open her mouth much better. The tonsils were still swollen but paler in appearance, the patches still present, some slightly larger but none had become confluent. Local applications of sodæ bicarbonate continued, and a mixture of tincture ferri chloride and chlorate of potash prescribed.

Case II.—On December 16, I was again summoned. My little patient of the previous day was up and playing with her baby sister. Maud Vreeland, aged eight, had been taken sick, during the night with repeated chills, high fever, vomiting and severe sore throat. The busy girl of the previous day was now too sick to lift up her head. Face flushed, eyes swollen and watery, skin dry and burning hot. Temperature in axilla 104°; pulse very rapid and small. Countenance of extremely anxious expression. She complained of pain from head to foot, and felt extremely tired and heavy. On inspection the tonsils were found swollen, of an angry red color, and towards the center of each gland an almost glistening white patch was seen, which seemed as if imbedded in the surface of the glands. The anterior pillars, the uvula and soft palate appeared of bright red color. The pharyngeal walls could not be seen on account of the swollen tonsils. The submaxillary glands had commenced to swell and become painful. In this case the general condition betokened severe constitutional disease.

Since the recommendation of chinolin in diphtheria by Dr. Seifert, in *Berl. Klin. Wochenschrift*, I had used this remedy with good success in relieving the diphtheritic throat complications of scarlet fever, and had met with equally favorable results in a number of doubtful cases of diphtheria which had, however, proved both contagious and infectious by attacking every member of the family with membranous sore throat and fever. Thus I resolved to test this remedy thoroughly in the present case. A five per cent. solution of chinolin tartrate in water was thoroughly applied with brush to throat. A two per cent. solution was ordered for local applications every three or four hours. Quinine alternate with mixture of chlorate of

potash and muriate tincture of iron in appropriate doses prescribed. Sponge baths, and milk in quantity constituted my treatment.

On evening visit patient was decidedly worse. She lay on her couch moaning constantly; her body fairly trembled from muscular tremors. Temperature in axilla 105.5° , pulse very rapid and small. The swelling of submaxillary glands had increased and the lymphatics along sterno-cleido-mastoid became involved. The tongue is brown and trembles. The patches on tonsils have greatly increased; the uncovered parts of tonsils are raised, thus giving the patch a sunken appearance. The uvula is greatly swollen, of dark red color, which radiates in streaks over the swollen, lighter red soft-palate. I made an application of the stronger chinolin solution. Former medication continued and teaspoonful doses of one per cent. chinolin solution added to internal treatment.

December 17: Patient's general condition decidedly worse. Temperature, 103° ; pulse, 140. Muscular tremors very severe. Moans constantly. She does not complain of pain unless questioned and then she complains of feeling so heavy and tired. The tonsils are now completely covered, the membranes are glistening, white and dry. The uvula is covered on its sides. The swelling of the glands of the neck has greatly increased and become very painful. Swallowing is performed with great difficulty; she has to twist her head in various directions and this causes much pain. Chinolin solution applied thoroughly, mild solution ordered every three hours, and internal solution and quinine. Chlorate of potash and iron mixture continued.

Evening visit: No change. Medications ordered continued.

December 18—evening: Patient moans; indifferent to everything except swabbing the throat which she now resists. Her breath has become very foul; a thin greenish white fluid is bubbling in the nostrils, oozing over the mucous surfaces and forming a membrane over the skin. The glands of the neck greatly swollen and very painful. The tonsils seem to meet within a line; are glazed with a dry thick leathery coating. The uvula is pressed forward as a large white pendulous body. Tongue dry, brown; teeth covered with sordes. Temperature, 100° ; pulse extremely rapid, irregular and feeble. It seemed useless to continue the chinolin treatment any longer, for the case was now progressing rapidly on its unfavorable course; and it may indeed be a useless task to look for a specific in this disease, yet who will not try a new remedy favorably reported, in desperate cases, as long as the recognized line of treatment is not neglected? Thus I now resolved to try the oil of turpentine, and gave one large teaspoonful in hot milk, ordered some whiskey in milk during the night. On account of the severe struggle of the patient against the medicines the other medicines were discontinued.

December 19: Patient's countenance of calm appearance. Skin feels moist, pulse full, soft, and steady. She had complained for some time after taking the oil of a distressing feeling in the stomach, accompanied by retching but no vomiting; after this sensation had passed off, she had dropped into the first quiet sleep lasting some four hours. The bowels had moved three times, smelling very foul, urine was passed several times in large quantities smelling strongly of violets. What she had last voided, about half a pint was of bright clear amber color, of violet odor; no precipitate on boiling. The fœtor of the breath was greatly lessened. The nostrils were much cleaner, free from oozing. The membranes appeared swollen and moist; the free surface of soft palate and anterior pillars had lost that angry red, and appeared pale red. Her pain and that tired heavy feeling were greatly improved, and she again took an interest in her surrounding. Encouraged by the general improvement I gave a second dose of two teaspoonfuls of the oil in hot milk.

Evening visit: General improvement continues. Temperature, 99°; pulse, 100, steady and full. The general pains and feeling of heaviness have disappeared. The fœtid odor only faintly perceptible. The oil had been well borne by the stomach; it had again acted on the bowels causing copious offensive stools smelling strongly of turpentine; later it had caused considerable irritation of the bladder. Urine was passed frequently in small quantities with much straining and pain. The urine is still of bright amber color and violet odor, free from blood but precipitates fully one half on boiling. The nasal passages are clean. The membranes are receding from the circumference where they appear very thin, almost transparent. The velum and pillars are of normal appearance; considerable salivation and loose hawking cough had occurred during the day, which had not been noticed since the first day of the attack. I discontinued the turpentine on account of albuminuria and stranguery. Gave an opiate, ordered hot fomentations to bladder, and opiate repeated as necessary to quiet the symptoms.

December 20: After the second opiate she had slept soundly for several hours when she awoke with a severe pain in her throat, a croupy cough and fever. I found her with face congested, of bluish color; nostrils working; labored respiration; inspiration prolonged and shrill; an almost incessant croupy cough and greatly changed voice. She pointed to the larynx as the seat of pain. The tonsils had receded somewhat, still covered in the center, the membranes were thinning out towards the free circumference. The uvula was much smaller and only covered on the sides. An inspection of the larynx was out of question on account of the still swollen condition of tonsils. However, the fresh attack of fever, the location of pain, the

rapid labored respiration, and the shrill prolonged inspiration, the husky cough, great change of voice, pointed with an unerring certainty to the larynx as the seat of trouble. I gave two overflowing teaspoonfuls of turpentine, whiskey in milk every third hour. Inhalations of steam from hops and lime in tent.

Evening visit: Voice completely lost. Inspiration very loud, shrill and rapid. Thorax laboring heavily. Cough low, coarse and husky. Micturition was neither very frequent nor painful. Urine was free from blood and casts, albumen present in large quantity. On account of the urgency of the symptoms I gave another dose of two overflowing teaspoonfuls of turpentine. Inhalations continued.

December 21: Improvement, both general and local. Temperature, 99°; pulse, 100; respiration less labored; inspiration not so loud. Great difficulty of swallowing on account of regurgitation of fluids through nostrils. Cough less frequent and clearer. Tongue moist. Tonsils not much swollen and covered only in center with thin loose membrane; their free surfaces look extremely ragged; uvula of usual seize and free from membranes. Patient suffers from frequent and painful micturition. Urine still clear, of bright amber color and violet odor. Coagulates almost solidly on boiling. Bowels have moved quite freely. Turpentine discontinued. Inhalations continued. Hot fomentations to bladder, and small opiates.

Evening visit: Improvement continues. Respiration greatly improved; inspiration still loud. One large teaspoonful of turpentine. Inhalations continued.

December 22: Well marked improvement. Respiration almost natural. The tonsils are now of natural seize, their surfaces are ragged, giving the glands a honey-combed appearance. The glands of neck are greatly reduced, no pain on pressure. Stranguery very severe. Urine still free from blood. Coagulates on boiling. From this day onward there was steady improvement; the voice returned feebly on the 27th, and the difficulty of swallowing continued some time longer. The treatment consisted of proper dieting and small doses of muriate tincture of iron. The last dose of turpentine was given on the 21st.

I must now return to the first patient, Gracie Vreeland. The 18th and 19th she was feverish in the afternoon, which yielded to quinine. From this time onward she was apparently in her usual spirits. On New Year's eve I was again called to see her. She was in convulsions caused by eating too many raw apples. She had two attacks between 6 and 8 P. M., and one from 2 to 3 o'clock January 1. The attacks were treated with chloroform inhalations and baths. Castor oil and injections brought copious stools of undigested apples. After the third attack she was in a very low condition from failure of the heart's action. The pulse remained feeble and small, and the skin clammy and

cold. She lay all day long in a semi-stupor from which she could be aroused long enough to swallow her medicines, which consisted of carbonate of ammonia, spirits of ammonia, whiskey, etc., and hot external applications. She died after midnight of January 1, 1884.

I have no doubt as to the direct cause of the convulsions, but am inclined towards the opinion that the failure of the heart's action was in part due to the mild attack of diphtheria from which she had recovered so rapidly under my simple treatment.

Case III.—On January 9, I was called to attend the baby aged eighth months. She was very restless, feverish, and the glands of neck considerably swollen. The tonsils and uvula were greatly swollen and covered with a snowy-white membrane. The membrane extending in streaks over the soft palate. I gave twenty drops of turpentine in milk. No local applications.

January 10: The oil had been well borne; it had moved the bowels freely and acted strongly on the kidneys, the urine having the characteristic odor of violets. Patient is still feverish and restless. The membranes are very moist, and patient drinks continually. A second dose of twenty drops of turpentine in milk administered.

January 11: The turpentine had caused considerable irritation of the bladder; the bowels had moved freely. Patient is free from fever. The membranes are receding. All treatment suspended for this day.

January 12: Local improvement continues uninterrupted. The uvula and the tonsils in part are free from membranes, the free surfaces of the latter are ragged. A third dose of twenty drops of oil given.

January 13: Much disturbance of bladder. Urine free from blood. The tonsils are only covered in center. Paregoric and fomentations to bladder. Turpentine discontinued.

January 14: Tonsils, now clear of membranes, are extremely ragged in appearance, otherwise of normal size and color. Patient has apparently fully recovered.

Case IV.—George Widenmann, aged fourteen. First seen April 5. He had been taken sick on the 3d with severe headache, repeated chills, high fever and pain in throat. On the 25th and 28th of March he had visited a neighbor family where diphtheria prevailed at the time, the first case in this family having terminated fatally within three days of attack.

Patient complains of severe headache, sore throat, and of feeling so heavy and tired. His face is intensely red; eyes projecting and watery. The submaxillary glands and lymphatics along sterno-cleido-mastoid are greatly swollen and painful. The foul odor of his breath is sickening. The tongue is dry and brown; teeth covered with sordes. The nasal passages,

tonsils, uvula and part of soft palate, and the posterior, pharyngeal wall, are covered with a heavy greyish yellow membrane. Temperature, 100°; pulse, 100. I gave two overflowing teaspoonfuls of turpentine in milk, and prescribed muriate tincture of iron in small doses.

April 6: The turpentine had been borne without distress or vomiting; it had moved the bowels freely, and acted strongly on the kidneys, patient having urinated three times, voiding fully a pint each time without any pain or straining. Urine is free from blood or sediment. There is marked improvement in his general condition; the headache, tired feeling, and pain in throat are greatly relieved, and the sickening odor of breath is subsiding. The dull, heavy, anxious appearance of the previous day had given place to a bright, almost cheerful, expression of countenance. A severe constitutional disease had apparently been changed into a local affection. Temperature, 99°; pulse, 78, regular and full. The membranes are thinning and receding at the free edges. The middle seems swollen and moist. He coughs and expectorates freely. The glands of neck are less painful to touch. A second dose of two large teaspoonfuls of turpentine administered in milk.

April 7: The pain in throat is entirely relieved. The swollen glands of the neck are subsiding, and the membranes have almost disappeared. The oil had been well borne by the stomach, but had acted harshly both on bowels and bladder. The urine passes off involuntarily almost every fifteen minutes. It is free from blood, but blood is passed in the severe tenesmus following the urination. The spasms of the bladder cause much pain and distress. There is no pain in the region of kidneys, nor does deep pressure cause pain in them. I ordered eight drops of laudanum repeated every two hours, and hot cloths to bladder until the bladder was relieved.

April 8: The membranes have disappeared, and the bladder acts normally. A tonic prescribed and case dismissed. I had used six drachms of turpentine in the two doses.

Case V.—Baby Zürn, aged two years. First seen May 26, suffering from high fever and inflammation of throat. Not seen on the 27th. On the 28th the case presented the fully developed characteristic features of an ordinary severe case of diphtheria. The membranes of greyish-yellow color extended over the tonsils, uvula and part of soft palate. The foetid odor present. The glands of the neck swollen so much that the prominence of the angle of the jaw was obliterated. The pulse was rapid and very irregular and feeble. Treatment from this day, for three days, consisted of one-half a teaspoonful of turpentine daily in milk. The membranes had disappeared in the usual manner by June 1. The oil was well borne and did not cause any distressing irritation of the bladder, although it acted strongly on kidneys.

Case VI.—W. Zörn, aged six; brother of Case V. Taken with chills, fever and sore throat on May 30. I saw him within a few hours of the commencement of fever. A yellow thick patch was then noticed on one tonsil. I gave him one teaspoonful of turpentine and ordered quinine alternate with muriate tincture of iron and chlorate of potash. On the evening of May 30, the temperature was 105°; delirium present. Gave a second dose of turpentine and ordered cold sponge baths and medicine continued.

May 31: The oil had caused considerable irritation of the bladder, but the patient's general condition appeared greatly improved, and the fever had almost entirely subsided. The membrane, somewhat enlarged, had not spread beyond the one tonsils. The glands along the sterno-cleido-mastoid were greatly swollen and very painful. Treatment consisted of turpentine and quinine and iron and potash mixture for four days, when patient was dismissed as cured. In this case the membranes not even covered completely the one tonsil.

Turpentine was first recommended in diphtheria by an American physician some ten years ago. In 1880 Dr. Bosse made a report in *Berl. Klin. Wochenschrift*, Number XLIII, of the accidental administration of a spoonful of turpentine to a child in the last stages of diphtheria with the apparent result of saving the life of the patient. Practicing in a district where diphtheria was endemic, Dr. Bosse tested the oil, and in a short time he treated twenty-three cases, children from two to twelve years of age. To the youngest he gave two drachms and three drachms to the older ones. In only four of the twenty-three cases was a second dose of oil given. All these cases recovered within forty-eight hours of the appearance of the membranes. He reports in addition sixty-three cases treated with the oil with four deaths; but as they were at a distance, Dr. Bosse was not only unable to control the treatment or report the cases accurately. Bosse concludes: "If skeptics might wish to argue that his twenty-three cases were all of a mild variety there was proof at least that the remedy considerably shortened the duration of the disease."—*Medical News and Abstract*, Volume XXXIX, page 152.

Dr. Satlow reports (*Jahrbuch für Kinderheilkunde*, in 1883) forty-three cases of severe forms of diphtheria seen in the epidemic of Leipsic in 1883, treated with turpentine with only one fatal case, a sickly boy of five years, who died on the sixteenth day of the disease from paralysis of the heart after all general and local symptoms had subsided. In twelve of the forty-two cases cured the following complications occurred: In three cases the membranes involved the larynx; the nasal passages were likewise attacked in three cases; continuous albuminuria present in one case; temporary albuminuria in six cases; hæmaturia occurred for two days in one case; paralysis in

four cases; temporary paralytic disturbances of the soft palate, difficulty of swallowing, etc., were frequently observed. Strangury without the presence of albumen in urine was a frequently observed symptom of temporary duration.*

Dr. Robert Koch, the great discoverer in mycology, found in his investigations of the bacillus of gangrene of the spleen, that turpentine even in solutions of one to seventy-five thousands prevented the development of this bacillus, and further, that turpentine and sulphuric ether are the only antiseptics found capable of preventing the development of this form of bacteria. Should diphtheria depend on one of these micro-organisms, as its cause, then the dose of the oil of turpentine, a tablespoonful to an adult, would stand in ratio to the weight of the body about ten times stronger than the percentage established by Kock, for the prevention of the bacillus of splenic fever, and, if on the other hand, it should finally be conclusively demonstrated that the disease does not depend on a micrococcus, "but is merely a putrid sore throat of greater or less severity" (Wood), then on account of its powerful eliminative action by bowels, kidneys, and lungs, turpentine will form a valuable adjuvant to any form of treatment adopted.

The following facts observed, of the action of turpentine, are deemed worthy of further consideration:

The oil was well borne by the stomach. In large doses it acts strongly on the bowels, producing copious offensive stools. The diuretic effect of the oil was a constantly observed phenomena; without causing any pain in the kidneys, the urine was voided in large quantities, free from all sediment on standing for days, and smelling strongly of violets. The urine was always free from blood, and I could not detect any casts. Its action on the bladder was the only distressing effect of the medicine observed. In Case IV, free blood was passed after each micturition. The urine itself was free from blood. I think that this troublesome action could largely be avoided by withholding the repetition until the effect on the kidneys was subsiding. Profuse salivation was also a constantly observed effect of the turpentine. Whether turpentine is a prominent factor of the albuminuria remains to be determined. It is not a dangerous complication.

The constitutional effect on the general character of the disease was always strongly marked; the headache and other cerebral disturbances as manifested by the semi-stupor and the feeling of heaviness as well as the pain in the throat, and the general pains all over the body subsided rapidly, the pulse lost its feebleness and frequency and became slow, full and regular. The tongue soon became moist, of natural color, the lips and teeth became clear, and the foul odor soon disappeared.

*THE PHYSICIAN AND SURGEON, Volume VI, Number I, contains a full translation of Dr. Satlow's report.

The membranes disappeared in a peculiar manner. First they became moistened and swollen, then the free edges became thinned out until the free surfaces remained covered only with a thin transparent film, which finally disappeared entirely. The membranes are either absorbed or dissolved, for in no case could we detect them in the saliva, although I constantly asked to have them preserved if detected.

The rapid improvement of the laryngeal complication in Case II, and the apparent change of the general character of the disease in Cases IV, V, VI, was to me simply unprecedented and astonishing.

Turpentine, whilst one of the most powerful germicides known, is also a perfectly safe remedy in doses proportionate to the weight of the body which cannot be approached with any other antiseptic without causing death. It is an active cathartic, is readily absorbed, permeates the entire system, and is rapidly eliminated by the kidneys and lungs, causing in its entire circuit of the body only a distressing effect on the bladder if given too often.

I have, indeed, come to seriously question the use of dangerous remedies as local applications calculated to destroy bacteria. The membranes, as long as their mere presence does not interfere with a vital function, as in laryngeal complications, cannot be regarded as dangerous, and when the larynx is involved in children, all applications are practically superfluous for long before they can possibly dissolve the membranes life will be extinct from want of air. Diphtheria must be regarded as a constitutional disease in which danger does not come from the membranes unless they obstruct the larynx, but as constantly dangerous from the severity of the constitutional symptoms as manifested most prominently by the extreme debility of the patient; and the constant harrassing of the sufferer with local applications of irritating, if not of a caustic character, is illy calculated to improve the general condition, whilst the danger of local infection is correspondingly increased. The severer measures of the days of Bretonneau—the painting of the membranes with equal parts of hydrochloric acid and honey, or the use of lunar caustic,—have long since been abandoned as not only useless but actually dangerous. Yet, now, when here and there local applications of corrosive sublimate are reported as the most recent and most powerful germicide, I consider it an imperative duty that the profession should pass judgement on the use of such dangerous remedies. In our days, perhaps but few physicians have observed the membranes during the entire course of a severe case of diphtheria left to nature's own resources; in our humane desire to battle with the disease we have constantly sought to strike at its most exposed intrenchments and thus lost perhaps most valuable time in not recognizing the harmlessness of the membranes in

comparison with the constitutional ravages of the disease, or perchance directly forced the enemy to attack deeper and more vital structures. In actual practice the hand guided by the judgement of the physician cannot perform all local medication, and therefore it behooves us to carefully consider the nature and character of the remedies placed in the hands of the frightened mother and nurse.

I do not wish to be understood as contending against those milder measures instituted for aiding the removal of the membranes, as the inhalations of cold steam, or topical use of lime-water, but as contending against those formidable measure calculated to destroy micrococci or bacteria. Moreover, let it be remembered that the blood teems with micrococci or bacteria in the severer forms of diphtheria, and that a malignant or gangrenous case manifests its characteristic features from the very onset in the majority of cases, hence, the futility, if not pernicious practice, of attempting to cure such a case by applications which destroy at best but a very limited number of these organisms colonized in the visible false membranes.

UPON THE USE OF NITRATE OF SILVER IN GYNÆCOLOGY.

BY GEO. H. CLEVELAND, M. D., LANSING, MICHIGAN.

Much has been said upon the merits and demerits of nitrate of silver in gynæcological practice, some writers positively stating that much harm arises by the inflammatory conditions, the dense cicatritial formations and contractions which they maintain oftentimes results from using the solid stick and powerful solutions, also from inconsiderate and indiscriminate use, etc. On the other hand, we are told by eminent authorities that in nitrate of silver we have the remedy *par excellence* for the treatment of diseases peculiar to women. Though not adopted to all conditions, or to all stages of the same condition, yet in the hands of the properly qualified practitioner it has proved to be of great value. "To be sure," they remark, "like many other drugs we use, if not applied properly and with the careful discrimination necessary in all cases, it will prove to be more harmful than efficacious."

Thus we find the varying opinions, and some of them extreme. While I do not uphold or believe in a routine use of this remedy, yet I think there are many disorders in which nitrate of silver could be used to a much better advantage than the numerous other substances recommended. The fact also that nitrate of silver is extensively used in genito-urinary affections, has led me to inquire into its therapeutics in this special relation.

Nitrate of silver, is principally used in the form of the "solid stick" directly applied, and in the form of aqueous solutions of

various strengths, applied by means of an applicator, or by injections. There are a few special modes of application as Sallemund's porte-castique, Sente's method, etc.

Hypertrophous and inflammatory conditions principally require its use, especially in inflammatory conditions of a low grade and chronic character. In these conditions what is termed an alterative effect is desired, and is brought about by changing the diseased action into a healthy one by the application of powerful astringents and caustics. The aim is to check the exudation and cell-migration, and bring the vascular wall to a healthy state. Nitrate of silver is classed as a mild escharotic, and caustic, and the method of its action is understood.

I will point to a few of the more prominent conditions which may call for the application of this substance.

Purulent Vulvitis.—"The vulva may be painted over once in every forty-eight hours with a solution of nitrate of silver, ten grains to one ounce of water (.65 to thirty cubic centimeters), and kept constantly powdered with lycopodium, bismuth, or starch until recovery is complete."

Pruritus Vulvæ.—"If vaginitis or vulvitis be present great relief will often be obtained by painting the linnig membrane of the diseased part over with a strong solution of nitrate of silver, or by touching the whole surface very lightly with the solid stick and then using the tampon of cotton and glycerine."

"By washing the neck and cervical canal as far up as convenient with a strong solution, twenty grains to one ounce of water (1.30 to thirty cubic centimeters), or when the pruritus is due to some vesicular eruption on the genitals, the application being made to the affected part, this troublesome affection can be removed."

Dr. Charles (*Annales de Gynécologie*) speaks highly of the use of nitrate of silver in this disorder. He says: "The seat of the itching is oftenest near the clitoris or in the nymphæ, sometimes at the margin of the arms. It is necessary to cauterize freely, passing the crayon two or three times over the affected surfaces and even somewhat beyond them." This writer also states that he has found, without a single exception, great relief from the first cauterization, often a complete cure. "Sometimes it is necessary to recur to the cauterization a second or third time after some days." Instead of using the crayon a strong solution, two scruples to one ounce water (three hundred to thirty cubic centimeters), may be used with perhaps equal advantage.

Vaginismus.—Solutions of different strength are used in this affection with varying success. Schroeder uses a very powerful solution, as high as two and one-half drachms to one ounce of water (ten to thirty cubic centimeters). He bathes the genitals carefully with dilute lead water first, and then pencils the sensitive parts with the above solution. Byford, of Chicago, ap-

plies the solid nitrate to the vulva every ten or fourteen days, and uses tannic acid and glycerine during the intervals.

Vaginitis.—In the specific variety of vaginitis nitrate of silver is much used and very highly prized. It is the only local remedy mentioned by Thomas in his work on "Diseases of Women," page 220, which reads as follows: "Sims' small speculum should be passed, the cervix and vaginal walls cleansed with absorbent cotton, the whole canal washed over with a solution of nitrate of silver, one scruple to one ounce of water, and a tampon of carbolized cotton soaked in glycerine applied, so as to prevent all contact of the opposing walls. This should be renewed once in every twenty-four hours. But lengthy renewal will not be found necessary, for cure will, as a rule, very soon occur." Simpson recommends a solution of just one-half the strength used by Thomas. Solutions of various strength, however, are used, according to the opinions and fancies of the advocate, and their efficiency will depend upon the frequency and manner of use, and the individual cases requiring their application.

In *simple vaginitis*, however, this remedy which once enjoyed very popular favor, has now fallen into disuse, and it is now declared that better results can almost always be obtained by other means.

The application of nitrate of silver was once the favorite method of treating all varieties of *urinary fistulae*, but this has also fallen into "prominent obscurity," on account of the advent of more improved procedures of treatment.

In the various inflammatory affections of the cervix, nitrate of silver is largely used, and it is in this particular situation that this remedy is oftentimes very indiscriminately applied, both in the different varieties of the purely localized manifestations of the cervix, wherein the use of nitrate of silver is not always indicated; and on the other hand in abrasions of the cervix resulting from an extension of an inflammatory condition in the cervical canal, also in cases of lacerated cervix. These are cases in which there has been a lack of recognition or special examination, and a constant application of the caustic to the cervix, will at the very best, result in little if any good.

In the *indolent ulcer*, the *inflamed ulcer* the *fungous ulcer* and the *senile ulcer*, nitrate of silver and other more powerful escharotics are used.

In *diphtheritic ulcer*, this caustic should not be used. In the above mentioned ulcerations the solid crayon is principally applied, as the most powerful alterative effect is necessary.

In *granular degeneration* of the cervix, the treatment is commonly commenced by using the solid stick.

In *cystic* and *follicular degeneration*, the contents of the cysts are evacuated by a bistoury, and their cavities thoroughly

cauterized by a sharp point of nitrate of silver. *Syphilitic ulcers* may also be cauterized by this substance.

In mild inflammations, not approaching ulceration or degeneration, a solution may be used of appropriate strength, and applied every four or five days.

In *acute endometritis* caustic applications are not recommended, but in the chronic form of this disease (granting under the term of *endometritis*, an inflammatory condition of the entire intra-uterine tract, both cervical and corporeal) nitrate of silver has been, and is still, used to a large extent. It is used in the form of a solution, the solid stick, and by fusing and allowing it to cool upon the end of a probe.

Probably as much success has been achieved, in treating this obstinate affection, with argenti nitras, in a proper and careful manner, as has been accorded to other remedies of the alterative type. A saturated solution of carbolic acid, compound tincture of iodine, nitric acid, chromic acid, acetic acid crystals, alum, sulphate of copper, acid nitrate of mercury, zinc chloride and sulphate iodoform, and many more less powerful, have been used with varying results. Their success, however, (and this can be said of all remedies of this class), has no doubt depended, and been influenced to a considerable degree, by the extent and thoroughness of their application, by the condition and constitution of the patient, by the internal treatment, and by the general surroundings. It is not for me to say what all these conditions should be, excepting in regard to extent and thoroughness of local application, as that would be outside of the original intention of this article. The success of the local application of argenti nitras (and other remedies of the same class) in endometritis, will depend greatly upon the previous preparation of the diseased surface, or in other words, the canal must be dilated, and the surface of the membrane relieved of the thick tenacious discharge. In regard to the dilation, I can impress it no better, than to quote the remarks of Thomas as follows: "If this be neglected and the practitioner satisfy himself with passing through the constricted orifice, nitrate of silver, iodine, pencils of zinc, alum, iron, etc., once or twice a week, no good whatever will result. After months, or even years of treatment, he will discover that the mild means which he has adopted have left the disease uncontrolled; or that the severe ones have increased contraction of the os, which renders menstruation difficult and painful." The discharge may be removed by means of a syringe, piece of sponge, or cotton wound upon an applicator or stick. These remarks refer more particularly to the cervical canal.

Applications to the uterine cavity above the internal os are not often called for, though there is no doubt that solid caustic may be applied with safety in chronic cases, after preliminary dilatation of the cervical canal. This is effective treatment in

some instances, but injury is often done, by over-stimulation, and too prolonged contact of the caustic.

"Nitrate of silver," states one writer, "should not be used for intra-uterine injections, as even in weak solutions it gives rise to violent uterine colics, often of long duration."

In *cystitis*, obstinate causes of which the practitioner will often meet in connection with female affections, nitrate of silver has proved to be valuable. Generally beginning with a weak solution, and gradually increasing the strength up to twenty grains to forty grains to one ounce of water (1.30 to 2.50 to thirty cubic centimeters), not very seldom giving beyond this last figure. This treatment for cystitis, has within late years become quite popular, and many good results have been achieved.

In *urethritis*, also, the application of a weak solution will often be found beneficial.

AUTHORITIES REFERRED TO.

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ORIGINAL TRANSLATIONS.

Translations from French Journals for THE PHYSICIAN AND SURGEON.
BY F. B. FLORENTINE, M. D., SAGINAW CITY, MICHIGAN.

IN RELATION TO THE DISCUSSION UPON THE DISPLACEMENTS OF THE BRAIN IN DIFFERENT ATTITUDES.

BY FRANCOIS-FRANCK, PARIS.

The question raised by M. Luys at the Academy of Medicine in the last session of the 25th of March, in regard to the displacements of the encephalon under the influence of changes of attitudes, is too complex to make it possible to face it, on all its sides, in a simple article of a journal. We have successively treated on the subject in the prolonged discussion that followed the lecture of M. Luys, of the moments of expansion of the brain, of the typography of the cephalorachidian fluid, of the absolute and relative weight of the brain, of the compensating dilatation of the lateral ventricles. Being unable to discuss the different subjects, we will therefore confine ourselves to the

single point that constitutes the *fond du débat*. The question that we ask ourselves is as follows:

Is the brain subject, under the influence of changes of attitudes, in the cranial cavity, limited by complete bony partitions, of displacements analogous to that which may be presented when the skull is open, whether upon the cadaver, or animals?

In the quite summary criticism that we here present, we will endeavor to put in bold relief the essential difference that seems to exist between the conditions created by experimentation and that which exists normally; this difference consists as to the opening of the skull permitting the atmospheric pressure to act upon the contents of its fluids and to trouble in a radical manner the equilibrium of the brain in the skull. Our conclusion, that we here formulate by anticipation, is, therefore, that of M. Luys, applied by M. Collin; it is the same as that which was defended by M. M. Bécларd, Sappey and Marc Sée, to know that, in the closed skull, the normal movements of the displacement of changes of attitudes, are as yet to be demonstrated. In order to legitimate this opposition of ideas emitted by M. Luys, we satisfy ourselves to expose a criticism reserved of facts upon which he was supported, by leaving aside as stranger to the subject in view all researches that we have executed ourselves upon the effects of venous and arterial circulation in different attitudes. In the *vertical attitude*, the column of the cephalorachidian fluid *tends* to abandon the cranial cavity and accumulate itself upon the declivous region of the canal; it exercises a veritable aspiration in the interior of the skull, a fact that we have already insisted upon (Marcy, "Circulation," 1881, page 538). In order to demonstrate this fact, it suffices to practice a trepanation, permitting the atmospheric pressure to exercise itself in the anterior of the skull; we see upon the cadaver or animal, in a vertical attitude, the fluid spreading the dura mater at the lumbar regions, or flow out if the medullary sack is open. We can also, as we have often done, produce the entrance of air, whether in the skull or under the occipitoatlodian membrane, by making a puncture of the dura mater, when the head of the animal is elevated above the level of the rachis, and, more especially if we put the subject in a vertical attitude. This cephalorachidian aspiration adds itself to a venous aspiration that we do not want to make intervene here, in order to simplify our statement: both are of a normal state, satisfied by some intracranial circulatory modifications, and coöperate to insure an equilibrium of the encephalon in the skull. The only fact of an opening in the skull upon a subject in a standing position, at once changes in a complete manner the equilibrium of the different liquid and solid parts contained in the skull; this operation introduces a foreign factor, by permitting, more or less completely, the atmospheric pressure chasing

away, by reason of its weight, the sub-arachnoidian fluid in the cranial cavity. This liquid, as we know, and moreover, facts well established by the recent considerations of M. Marc See in his labor of 1878 (*Rev. mens. méd.*), plays an essential part in the equilibration of the encephalic mass: if chased away from the skull by its own weight and the atmospheric pressure combined, it is evident that the displacements of the encephalic mass, observed in these artificial conditions, cannot be considered *priori* as produced in a normal state. Are we willing to have a simple proof that the presence of the sub-arachnoidian fluid in the normal quantity is indispensable for the equilibrium of the brain in the skull? It suffices to go back to the semi-schematic experience of M. Sappey, and expose with details in the session of the 29th of August, last, ("Bulletin," page 559); simply recall the essential points; an adult skull being separated from the trunk with a portion of the cervical column, with a tampon, we obliterate the rachidian canal, the only passage by which the sub-arachnoidian fluid may escape; disposing of the skull, then, in such a manner as to leave its base uncovered, we observe that at a level of numerous openings, in divers regions, the inferior surface of the brain rests in close contact with the base of the skull. The nervous mass does not fall under the influence of its own weight; it is sustained by the fluid in which it is, as floating and making its base the larger portion of its weight. The moment that we give issue of the fluid, after raising the tampon from the rachidian canal, the brain in obedience to its own weight, detaches itself from the base: (an interval quite manifested separate the two surfaces, up to this, so exactly contiguous). We can accept, for the persistence of contact between the brain and skull before the fluid was permitted to escape, either the explanations of M. M. Sappey or Marc See (see "Bulletin," page 560 and 653), at our actual point of view, it is important only to recognize the accuracy of the fact, which is not contested. When the sub-arachnoidian fluid has been evacuated, in any manner whatever, the brain, placed in some conditions of abnormal equilibration, can in effect displace itself; but in a physiological state nothing authorizes us to conclude that it must be the same. We already foresee certain difficulties in the application to the untouched skull, phenomena of displacements that can be observed in the opened skull, of which its contents is submitted to the atmospheric pressure and can afterwards, undergo an exaggerated evacuation of the sub-arachnoidian fluid.

When the subjects are placed in the vertical position, the depression of the membranes, normal or accidental, replacing a portion of the bony vault, is produced by virtue of another mechanism that which was indicated, and does not prove that the brain normally digresses from the vault. It results from

the aspiration exercised in the cranial cavity, by the column of sub-arachnoidian fluid, as well as venous, spreading from the skull to the rachis and functioning in the vertical attitude, in the same manner that does the long branch of a siphon. The atmospheric pressure drives back the parietal membranes and depresses them to a cupula: this depression does not reveal, then, the normal existence of digression produced by the vertical attitude between the convexity of the brain and the vault of the cranium. it simply signifies that the intra-cranial aspiration permits to the pressure of air to manifest itself by the deformation of the parietes in which the resistance is insufficient.

In the transverse position, the head down, what modifications supervene in the equilibrium of the solid and fluid parts contained in the brain?

Whenever we see the fontanel of a child strongly inclined, we at first think that the weight intervenes and displaces the sub-arachnoidian fluid, and in this manner, raises that portion of the membranes lining the cranial vault. But when we consider that the same effect results from the act of coughing, or any effort whatever, we at once understand that another factor intervenes and adds its influence to that of the first; the arterial blood, pushed more strongly towards the skull, as it is towards all other peripheral regions, distends the encephalic vessels and tends to displace the other mobile fluids in the interior of the skull; but the venous blood, retained at the approach of the thorax from the fact, also, of simple effort or from a series of efforts that constitute cough, not granting to the arterial pressure, therefore it is the sub-arachnoidian fluid that experiences the maximum displacement: it takes refuge in the regions where it encounters less resistance, and it is at the level of the normal or accidental fontanel that we see it accumulate.

In the transverse position, all the elements, weight, excessive arterial tension, accumulation of venous blood, intervenes, and in this manner, causes the sub-arachnoidian fluid to press against the membranes of the skull and consequently induces them to bulge out.

So far, we therefore fail to find any conclusive argument in favor of the displacements by slipping or heaping of the encephalic substance under the influence of changes of attitudes, whenever the cranial cavity is protected from the atmospheric pressure. Upon the cadaver, the experience of M. Luys is perfectly exact, but does not allow, according to our views, other conclusion than this: *when we open the skull of a subject in a vertical attitude we permit the fluid contained therein to escape under atmospheric pressure; the brain being no longer sustained, hung up, abandons its bony parietes and sinks upon itself.*—*Gazette Hebdomadaire de Médecine et de Chirurgie.*

EDITORIAL PERISCOPE.

MICHIGAN STATE MEDICAL SOCIETY.

The Nineteenth Annual Meeting of the Michigan State Medical Society was held at Grand Rapids, Wednesday and Thursday, June 11 and 12. The Wednesday morning session opened with the most favorable prospects of a large and entertaining convention. A much larger number of physicians were present than has been customary at the opening. The meeting was called to order at 10 o'clock by the President, Dr. A. F. Whelan, of Hillsdale. The divine blessing was evoked by the Reverend B. F. Sargent. An address of welcome was made by the mayor of the city, the Honorable N. Belknap.

Courtesies and Social Features.—The use of his opera house for the two days was tendered by the proprietor, Mr. Powers. The members of the society were entertained on Wednesday evening by Dr. and Mrs. Charles Shepard, at their residence, Number 98 Ottawa street. The freedom of their club-house was given by the Peninsular Club, to the members of the society. A special train was very generously provided by Mr. Hughardt, President of the Grand Rapids and Indiana railroad, for an excursion to Traverse City, a pleasure that was enjoyed by the majority of the members.

The Secretary's report showed that there were two hundred and forty-six names on the roll of membership. The dues and fees for several years have been greatly in excess of the running expenses, and it was recommended by Dr. Smart, the treasurer, that the yearly due be reduced.

Professor Donald Maclean, chairman of the Committee on Surgery, reported a number of very interesting and instructive surgical cases. He presented two cases of resection of the elbow joint, where the most perfect results had been obtained; and the reparative power of nature was most forcibly illustrated in a case of resection of the shoulder, following a gun-shot injury.

"Expert Testimony" was the title of a paper read by Dr. S. P. Duffield, of Dearbornville. The author upheld the right of physicians to extra fee for expert testimony in the courts. He cited the rulings of various courts, that favored the physician, when he refused to testify as expert, until extra compensation was given. A case of his own was mentioned where the supervisors refused to pay him for making an examination after strychnine poisoning, for which he charged \$250, but afterwards allowed the amount rather than try the case in the courts.

"The Dry Treatment of Chronic Suppurative Inflammation of the Middle Ear." A very instructive paper on this sub-

ject was read by Dr. C. J. Lundy, of Detroit. The discussion of the paper brought out various views on the subject. Dr. McCall, of Lapeer, made some extended arguments, in favor of the "dry" or boracic acid treatment.

"The Use of Turpentine in Diphtheria," a paper read by Dr. Conrad George, of Ann Arbor, in which he gave his personal experience in a number of cases with this method of treatment. The effects of the remedy were most minutely detailed. The quantity of the oil that can be born by small children, without any ill-results is most astonishing. The carefulness and accuracy with which the paper was prepared were shown in the extreme interest manifested by the society during the reading.

"Exploration of the Male Urethra." Dr. H. O. Walker, of Detroit, read a paper which called attention to the superiority of an instrument constructed by him, for removing the fragments of a crushed calculus from the bladder. The paper was full of good thoughts, and the evacuator shown is exceedingly simple and practical.

"The Treatment of Enlarged Prostate Gland without the Use of the Catheter," was the subject of a paper by Professor A. B. Palmer, of Ann Arbor. The histories of interesting cases of enlargement of the prostate in old persons, were given. The author described a novel way to distend the urethra in prostatic hypertrophy. He caused the patient to pass his urine, and, while the stream was flowing, the end of the penis was seized with thumb and finger, suddenly stopping the flow, had him continue to force the urine from the bladder, this dilating the entire urinary passage.

"Origin of Malignant Tumors from Diseased Tissues," the title of a paper read by Dr. T. A. McGraw, in which the early removal of all tumors was advised.

"Perinephritic Abscess." Dr. G. K. Johnson, of Grand Rapids, read an instructive paper on this subject. He related the histories of two cases, one of which was exceedingly interesting, and detailed the treatment which proved successful in both cases.

"Treatment of Ulcers," the paper read by Dr. DeCamp, of Grand Rapids, on the treatment of ulcers, was full of instruction, and was well received by the members of the society.

The Committee on Admissions then made its report. About eighty applications for membership had been filed with the Secretary. The Committee recommended that the by-laws be so amended that each application for membership should, hereafter, be accompanied with the admission fee. Among the applicants, were a number of old physicians who had once been members, but to avoid paying the back dues of a number of years, presented their names as new applicants. Their admission led to some discussion, as previous years such par-

ties were compelled to pay up their dues before they could become members in good standing. It was then proposed to so amend the by-laws, that for the non-payment of dues for three years, the name of the member be dropped from the roll, and that such person should not be readmitted by application until after nine years.

The report of the Committee on Nominations was then presented. They made nominations, excepting for president, for all officers, delegates and committees, as follows:

Vice-Presidents—Dr. J. Perkins, of Owosso; Dr. J. M. Cook, of Muskegon; Dr. Gordon Chittock, of Jackson; Dr. C. Brumme, of Detroit.

Secretary—Dr. George E. Ranney, of Lansing.

Treasurer—Dr. A. R. Smart, of Hudson.

Judicial Committee—Dr. F. K. Owen, of Ypsilanti; Dr. C. V. Tyler, of Bay City; Dr. McCall, of Lapeer.

Delegates to the American Medical Association—Dr. William Brodie, of Detroit; Dr. H. B. Baker, of Lansing; Dr. J. H. Bennett, of Coldwater; Dr. J. B. Book, of Detroit, Dr. William F. Breakey, of Ann Arbor; Dr. Carl Brumme, of Detroit; Dr. J. H. Carstens, of Detroit; Dr. S. H. Clizbee, of Coldwater; Dr. Leartus Conner, of Detroit; Professor Edward S. Dunster, of Ann Arbor; Dr. S. P. Duffield, of Dearbornville; Dr. S. S. French, of Battle Creek; Dr. A. D. Hagadorn, of Lansing; Dr. H. O. Hitchcock, of Kalamazoo; Dr. George K. Johnson, of Grand Rapids, Professor Donald Maclean of Detroit; Dr. F. M. Oakley, of Ypsilanti; Dr. O. W. Owen, of Ypsilanti; Professor A. B. Palmer, of Ann Arbor; Dr. Foster Pratt, of Kalamazoo; Dr. George E. Ranney, of Lansing; Dr. W. F. Sigler, of Pinckney; Dr. H. B. Shank, of Lansing; Dr. Edward Snow, of Dearbornville; Dr. C. T. Southworth, of Monroe; Dr. Horace Tupper, of Bay City; Dr. C. V. Tyler, of Bay City; Dr. D. W. C. Wade, of Holly; Dr. A. F. Whelan, of Hillsdale; Dr. Charles Shepard, of Grand Rapids.

Committee on Legislation.—Dr. Foster Pratt, Dr. Piermonte, Dr. C. V. Tyler, Dr. Karson, Dr. A. R. Smart.

The society then proceeded to the election of its president. Dr. J. T. Main of Jackson, with a few well chosen remarks, presented the name of Professor Donald Maclean, of Detroit. The name of Dr. S. S. French, of Battle Creek, was brought before the meeting by Dr. A. R. Smart, of Hudson. In a very neat, terse and eloquent speech, Dr. C. T. Newkirk, of Bay City, seconded, in behalf of the young men of the society, the nomination of Professor Maclean. The report of the count of the tellers showed that Dr. French received 63 votes, and Professor Maclean 126.

"Placenta Prævia," was the subject of a scholarly and instructive paper, read by Dr. E. P. Christian, of Wyandotte.

"Gynecological Operations," with cases, were reported by

Dr. Charles Shepard of Grand Rapids. The paper possessed unusual merit and was deeply interesting.

"Nasal Catarrh," a paper read by Dr. A. W. Nichols, of Greenville, in which a number of remedies were recommended.

In order to adjourn in time for the members to get away on the evening trains, a number of papers were hurriedly passed over, being read only by title and referred without discussion to the publishing committee. The following are the papers thus hastily disposed of: "Traction of the Perineum for the Relief of Disease Incident to Hypertrophy of Prostate," by Dr. Hal C. Wyman, of Detroit; "Sterility in Women," by Dr. J. H. Carstens; "Administration of Chloroform," Dr. T. J. Sullivan, of Ann Arbor; "The Study of Sixteen Cases of Tracheotomy," Dr. C. Jennings; "The Treatment of the Puerperal Condition," Dr. Hugh McCall.

The President's Address.—The annual address of the President exhibited most careful research into the history of medicine. In President Whelan's able way, there was condensed into a comparatively small space, the history of medicine from its earliest period to the present day. It is the author's opinion that medical science had greatly aided in breaking the masks of ignorance and superstition, which prevailed in earlier times and during the dark ages. It had done this by educating the minds of the people to reach above the dogmas of the church, with its idolatry and superstition; that despite the most bitter warfare that had always been made against its teachings and advanced ideas, medicine had triumphed and would continue to do so in the future.

"Granular Lids," was the theme of a paper read by Dr. Eugene Smith, of Detroit.

"Chronic Aural Catarrh." Dr. R. J. Kirkland, of Grand Rapids, read a paper on chronic catarrhal otitis, in which he pointed out how to differentiate between this disease and true nervous deafness. He directed particular attention to the fact that deafness came on insidiously from this disease, and that a great degree of deafness existed before the patient knew of it.

It being evident that the general rules of the society were the cause of dissatisfaction, Dr. G. K. Johnson thought that much unpleasantness might be avoided by a judicious change in the articles of organization. To accomplish this reorganization of the society rules, he offered a resolution that a committee of five be appointed to make the desired changes. The resolution being adopted the President appointed Dr. G. K. Johnson, of Grand Rapids; Dr. ———; Dr. Hugh McCall, of Lapeer; Dr. Carman; Dr. Wm. F. Breakey, of Ann Arbor.

Remarks of the President-Elect.—Professor Donald Maclean the President-elect was escorted to the stage and introduced. His remarks were characteristic of the man. In a few eloquent sentences he thanked the society for the honor conferred upon

him. That he must certainly possess a very cold and indifferent nature if he did not show a sincere gratitude for the kindness thus bestowed upon him. The successful administration of his predecessor was referred to in the most glowing words of praise. While he hardly expected to fill the position with the same degree of efficiency as the retiring president, he would do all in his power to keep up the high standard which the society had attained this year, and if it were possible, he would have it reach higher attainments.

The communication sent to the society by the Women's Temperance Union requesting the preparations of papers on the effects of alcoholic drinks and tobacco, was read and Dr. Whelan hoped that some papers would be prepared upon the subject.

The society adjourned to meet at Port Huron the second Wednesday in June, 1885.

The following is a list of the names of applicants for membership who were received into the society this year. From an analysis of this list, it will be seen, that nine have been practicing medicine twenty-five years or more; that fourteen have been in the profession for twenty years; twenty-seven for more than twelve; forty-four for a longer period than four years, and with two exceptions, one a graduate of Detroit School of Medicine, the other of the University of Louisville, Kentucky, *all* have been engaged in active practice for nearly two years.

NAME AND ADDRESS.	SCHOOL.	DATE	BY WHOM RECOMMENDED.
Dr. Hoyt, Detroit.....	Detroit Med. College..	1872	Drs. Carstens and Kenyon.
Dr. Augur, Grand Rapids....	Jefferson Med. Col....	1877	Drs. DeCamp and Hake.
Dr. Williams, Ada.....	University of Mich....	1883	Drs. Wright and Hake.
Dr. Switzer, Montague.....	L. J. H. Col. of Med....	1872	Drs. Walkley and Kenyon.
Dr. Nichols, Martin.....	Casleton Med. Col.....	1852	Drs. McLeary and Smart.
Dr. Williams, Grand Rapids....	Bellevue N. Y.....	1878	Drs. Johnson and Griswold.
Dr. Lathrop, Royal Oak.....	Licensed.....	1848	Drs. Johnson and Tupper.
Dr. Manton, Detroit.....	Harvard.....	1881	Drs. Walker and Jennings.
Dr. Rowley, Detroit.....	Detroit Med. College..	1882	Drs. Shurley and Lundy.
Dr. Gillette, Detroit.....	University of Mich....	1879	Drs. Shurley and Connor.
Dr. Spencer, Fort Gratiot.....	Bellevue.....	1872	Drs. McCall and Stockwall.
Dr. Abbot, Sterling.....	Rush Med. College.....	1883	Drs. Newkirk and Tupper.
Dr. Frank, Detroit.....	Michigan Med. Col....	1882	Drs. Newkirk and Palmer.
Dr. McKintock, Detroit.....	Bellevue.....	1883	Drs. Shurley and Lundy.
Dr. Kirker, Detroit.....	Starling Med. College	1878	Drs. Brown and Shurley.
Dr. Kampa, Detroit.....	Detroit Med. College..	1881	Drs. Shurley and McGraw.
Dr. McKenzie, Berlin.....	University of Mich....	1877	Drs. Kirkland and Kimball.
Dr. Chapin, Grass Lake.....	University of Mich....	1865	Drs. Ranney and Christian.
Dr. Catlin, Grand Rapids....	Detroit Med. College..	1883	Drs. Sullivan and Johnson.
Dr. Comfort, Mount Bridge....	Columbus Med. Col....	1878	Drs. Nichols and Barnes.
Dr. Sutherland, Caledonia.....	Trinity Med. College..	1877	Drs. Griswold and Maclean.
Dr. Saines, Ionia.....	Univ. of Louisville....	1884	Drs. Nichols and Foster Pratt.
Dr. Brown, Detroit.....	Detroit Med. College..	1879	Drs. Connor and Alvord.
Dr. Upjohn, Hastings.....	University of Mich....	1875	Drs. McLeary and Shepard.
Dr. Freeman, East Saginaw....	University of Mich....	1882	Drs. Sullivan and Williams.
Dr. Kitchen, East Saginaw....	University of Mich....	1863	Drs. Shurley and Maclean.
Dr. Homer, Maple Ridge.....	University of Mich....	1882	Drs. Tupper and Newkirk.
Dr. Owen, Ann Arbor.....	University of Mich....	1883	Drs. Newkirk and Dickinson.
Dr. Huizinga, Zeeland.....	University of Mich....	1881	Drs. Heath and Palmer.
Dr. McGee, Detroit.....	University of Mich....	1882	Drs. Bennett and Towley.
Dr. Beardale, Jonesville.....	University of Mich....	1881	Drs. Bennett and Heath.
Dr. Fyle, Grand Rapids.....	University of Mich....	1883	Drs. Johnson and Boise.
Dr. Logue, Adrian.....	University of Mich....	1879	Drs. Bennett and Heath.

NAME AND ADDRESS.	SCHOOL.	DATE.	BY WHOM RECOMMENDED.
Dr. Bangham, Homer.....	University of Mich....	1882	Drs. Wright and Palmer.
Dr. Baker, Decatur.....	University of Mich....	1864	Drs. Andrews and Belknap.
Dr. Chedwick, Hart.....	Mich. Med. Col. Det....	1883	Drs. Shurley and Lundy.
Dr. Chadbourne, Ann Arbor.....	University of Mich....	1883	Drs. Sullivan and Hake.
Dr. Donovan, Detroit.....	University of Mich....	1876	Drs. Newkirk and Dickinson.
Dr. Gallery, Eaton Rapids.....	University of Mich....	1883	Drs. Sullivan and Knight.
Dr. Chandler, Richmond.....	University of Mich....	1876	Drs. Sigler and LeBarron.
Dr. Fasnelle, St. Johns.....	University of Mich....	1855	Drs. Shurley and Foster Pratt.
Dr. Gailey, Detroit.....	University of N. Y....	1877	Drs. Shurley and McGraw.
Dr. Cary, Stanton.....	University of Mich....	1868	Drs. Nichols and Barnes.
Dr. Holt, Grand Rapids.....	University of Pa.....	1882	Drs. Albright and Johnson.
Dr. Thompson, Plainwell.....	University of Mich....	1867	Drs. Smart and McCleary.
Dr. Grover, Big Rapids.....	University of Mich....	1880	Drs. Brown and Smart.
Dr. Shimmei, Bay City.....	University of Mich....	1880	Drs. Walkley and Hake.
Dr. Hensordt, Bay City.....	Detroit Med. College....	1881	Drs. Newkirk and McCarrol.
Dr. Wright, Howell.....	Detroit Med. College....	1884	Drs. Shurley and Ranney.
Dr. Washington, Roscommon.....	Trinity University.....	1876	Drs. Shurley and Tupper.
Dr. McKenzie, Plainfield.....	Detroit Med. College....	1881	Drs. Shurley and McGraw.
Dr. Noon.....	Col. of P. and S., N. Y....	1881	Drs. Strong and Alvord.
Dr. Kelley, Detroit.....	Bellevue, New York.....	1883	Drs. Palmer and Wright.
Dr. Perrin, Cheboygan.....	Michigan Med. Col....	1881	Drs. Sullivan and Hake.
Dr. Smith, Port Huron.....	University of Mich....	1876	Drs. Sullivan and Hake.
Dr. Platt, Port Huron.....	.....	.....	Drs. Shank and Sullivan.
Dr. Wells, Port Huron.....	University of N. Y....	1880	Drs. Sullivan and Hake.
Dr. Brown, Spring Lake.....	Rush.....	1870	Drs. Lundy and LeBarron.
Dr. Aylesworth, Cedar Springs.....	University of Mich....	1882	Drs. Chapin and Reed.
Dr. White, Reed City.....	Fort Wayne, College....	1880	Drs. Chapin and Reed.
Dr. Florentine, Saginaw City.....	Rush.....	1876	Drs. Dickinson and Williams.
Dr. Garrett, Middleville.....	Buffalo.....	1882	Drs. Tupper and Hamilton.
Dr. Campbell, Mason.....	Cincinnati.....	1876	Drs. Ranney and Post.
Dr. Morrison, Wayne.....	Buffalo.....	1861	Drs. Smith and Shurley.
Dr. Balls, Zeeland.....	Practiced 25 years.....	.....	Drs. Shepard and Shank.
Dr. Stoddard, Muskegon.....	Bellevue.....	1867	Drs. Parmenter and Johnson.
Dr. Chivers, Colon.....	Detroit Med. College....	1877	Drs. Connor and Alvord.
Dr. Fuller, Hastings.....	Buffalo.....	1877	Drs. Knight and Young.
Dr. Flinterman, Detroit.....	Gottinger.....	1864	Drs. Carstens and Walker.
Dr. Denslow, Muskegon.....	University of Mich....	1880	Drs. Griswold and Christian.
Dr. Frazer, Sherwood.....	Victoria College, Ont....	1865	Drs. Sullivan and Maclean.
Dr. Campbell, Ann Arbor.....	University of Mich....	1882	Drs. Griswold and Christian.
Dr. Crosby, Jackson.....	Practiced 25 years.....	.....	Drs. Kimball and Campbell.
Dr. Parmenter, Vermontville.....	University of Mich....	1857	Drs. Young and Patterson.
Dr. Howland, Flint.....	University of Mich....	1870	Drs. LeBaron and Wade.
Dr. Donelson, Muskegon.....	University of Mich....	1872	Drs. Cook and Wade.
Dr. Maxon, Battle Creek.....	University of Mich....	1888	Drs. Griswold and Alvord.

OPEN LETTER ON THE "ELECTION OF PRESIDENT."

The following letter, which was received too late to appear in the department of "General Correspondence," is inserted here because of its great moment:

DR. J. J. MULHERON, Editor *Medical Age*: Sir—If the mysterious, enigmatical sentence, with which your brief sketch of the late meeting of the State Medical Society closes,* has any reference to the frivolous and self-contradicting rumors about "beardless boys from Ann Arbor" and "Michigan Central railroad passes;" or if it is intended to refer in any way to me or my friends in the association, I desire to say once for all, that I have in my possession, open to your inspection, or that of any one who feels interested, the most unanswerable and convincing testimony (a huge mass of it) to prove that, so far

*In regard to the means employed for the election of president the less said the better.—*Medical Age*, June 25, 1884.

as we are concerned, any such insinuation is *untrue, unjust and absurd*.

I am in a position to prove that no means were employed *on our part* for the election of president except such as were in every particular, and in all respects, consistent with the strictest principles of honor and honesty.

If reputable testimony can be produced to contradict or disprove these averments, or to show that my election was other than the calm, deliberate, free and independent act of the association, I hereby declare in all sincerity, that I stand ready, on the presentation of such testimony, to resign the office of president and to withdraw altogether from the society.

The meeting this year will be remembered as the most numerously attended, as well as the most congenial and successful in the history of the association up to the present time.

It has seemed to me unfair and intolerable that those whose presence and efforts combined to secure such a profitable and honorable professional gathering, should be permitted to rest under any undeserved stigma whatever.

It is, as a matter of justice to the association as a whole, and in the hope of maintaining and increasing the spirit of peace and harmony which prevailed this year, rather than as a defense of any individual or faction, that I have ventured to present the foregoing matter-of-fact statement.

I am, etc.,

DONALD MACLEAN,
72 LAFAYETTE AVENUE, DETROIT.

July 1, 1884.

THE INTERNATIONAL MEDICAL CONGRESS OF 1884.

The Eighth International Medical Congress will be held in Copenhagen, beginning on Sunday, August 10, and ending on Saturday, August 16. From the official "Rules and Programme" the following is taken:

Membership.—Any medical man qualified by law to practice in his own country may become an ordinary member by registering his name, paying the subscription (twenty Danish crowns), and taking out the tickets of admission. The registration will be conducted in the University buildings on and after August 9, from 9 A. M. to 5 P. M. on the 9th; from 9 to 11 A. M. on the 10th; and from 8 to 9 A. M. on the following days. The inscription may also be obtained in advance by sending to the Secretary-General, Professor C. Lang, the amount of the subscription, together with a specification of the applicant's name, position and residence. Each member is entitled to a copy of the "Transactions" when it is published.

Hotel Accommodations.—A bureau will be established at the railway station, where information in regard to lodgings, etc., may be had by members on their arrival.

Steamships.—It is advised that those who intend to go for the special purpose of attending the Congress to take the Thingvalla (Danish) line of steamships direct from New York to Copenhagen. This vessel sails from New York, July 19.

The work of the Congress will be exclusively scientific in character, and in fourteen sections, which will meet twice daily. If the same or similar subjects are contained in the programmes of different sections, the sections may agree to discuss such subjects in common.

Medical students, as well as ladies and gentlemen who are not members of the medical profession, but may be interested in the proceedings of any particular meeting, may be invited or allowed by the officers to be present at such meeting.

DEATH OF PROFESSOR SAMUEL D. GROSS.

The great gap that was made in the professional ranks in the death of Professor J. Marion Sims had not begun to fill up, nor had the shock passed away, that was felt by the profession at the announcement of the death of that brilliant and beloved brother, when it lost another of its most widely-known and respected members. Professor Samuel D. Gross died at his home in Philadelphia, on the 6th day of May. He had reached the ripe old age of seventy-nine years. The death of this great and venerable surgeon and distinguished writer and teacher, closed the record of a well-spent life, but he will continue to live in his immortal thoughts and works. The *Medical Record* prints the following synopsis of the early life, and later work of this eminently great and good man, who had conferred upon him title and honor by the highest scientific institutions, and professional bodies in the world:

The life-work of this great man is finished, and how magnificent that work has been! Rather we should say how magnificent it is, for though it is finished, and the great mind which wrought it has ceased to be, the perfected work will live on till there is no longer a place for the art of medicine. Even while we write there is sorrow in the profession throughout the length and breadth of our land, and wherever science is known and greatness and learning honored, his death will be deplored.

Samuel D. Gross, M. D., LL. D., D. C. L. Oxon., LL. D. Cantab., LL. D., Edinburgh, died on Tuesday, May 6, at his residence in Philadelphia, after an illness of some weeks. He was born near Easton, Pennsylvania, in July, 1805, and was therefore in the seventy-ninth year of his age. He received his classical education at Wilkesbarre, and at the High School at Lawrenceville, New Jersey, and began his medical studies at an early age under the preceptorship of Dr. J. K. Swift, of Easton, after which he continued them for nearly two years under the cel-

ebred Dr. George McClellan, of Philadelphia. He was graduated from the Jefferson Medical College in 1828, and entered upon practice in Philadelphia.

The leisure hours which befall every young practitioner were spent by Dr. Gross in the translation of several standard French and German works. But his ability and activity removed him above the plane of the translator and two years after graduating he brought out his first original work upon "Diseases and Injuries of the Bones and Joints." At this time he removed to Easton, but was elected in 1833 as Demonstrator of Anatomy in the Medical College of Ohio. This position he accepted, and two years later was elected Professor of Pathological Anatomy in the Medical Department of the College in Cincinnati. Here he delivered the first systematic course of lectures on pathological anatomy ever given in the United States, writing meanwhile his second book, "The Elements of Pathological Anatomy," the first work of its kind published in this country. From this chair he was called to the Chair of Surgery in the University of Louisville, where for ten years he gave evidences of the genius which was subsequently to be honored by the civilized world. From this chair he was called to that of Surgery in the University of New York, but returned at the end of one year, at the earnest solicitations of his former colleagues. Here he remained until 1856, when his alma mater called him to teach in the halls whence he had gone forth as a distinguished student.

Shortly after coming to Philadelphia he founded the Pathological Society of Philadelphia, being its first president. In 1867 he was elected president of the American Medical Association, and four years later was chosen chairman of the Teachers' Medical Convention in Washington. In 1872 he visited Europe for the second time, not as an unknown or a rising man, but as a master in his science and art, a successful surgeon, and an author whose reputation had circled the globe. While in England the University of Oxford celebrated its one thousandth anniversary, and gracefully complimented the great surgeon and American medicine by conferring upon Dr. Gross the degree of D. C. L. In 1880 the University of Cambridge conferred upon him the degree of LL. D., which degree he had already received from the Jefferson College. On April 17, 1884, the University of Edinburgh, at its tercentary anniversary, conferred the degree of LL. D. upon him, and the University of Pennsylvania paid the same tribute to his learning on May 1.

Not the least among his honors was his unanimous election to the presidency of the International Medical Congress which met in Philadelphia in 1876. In 1880 he organized the American Surgical Association of which he was president until 1883.

Of his greatest literary work, his "System of Surgery," it were scarcely necessary to speak. While his fame goes down to

the posterity of succeeding generations as a blessed heritage, his great work on surgery will remain a tangible legacy to the students of many lands and tongues.

In four great cities Dr. Gross has been a teacher of surgery, and thousands of his pupils are scattered throughout the Union. As a teacher of surgery, he has long been recognized as the greatest which the country has ever produced.

At a dinner given to him in Philadelphia, April, 1879, Dr. Gross said: "After fifty years of earnest work I find myself still in the harness; but although I have reached that age when most men, tired of the cares of life, seek repose in retirement, and abandon themselves to the study of religion, the claims of friendship, or the contemplation of philosophy, my conviction has always been that it is far better for a man to wear out than to rust out. Brain work, study, and persistent application has been a great comfort to me as well as a great help; it has enhanced the enjoyment of daily life, and added largely to the pleasures of the lecture-room and of authorship; indeed, it will always, I am sure, if wisely regulated be conducive both to health and longevity. A man who abandons himself to a life of inactivity, after having always been accustomed to work, is practically dead."

How truly he carried out these precepts is seen by the fact that, within a few weeks of his death, he has prepared two able papers—one on "Wounds of the Intestines," for the American Surgical Association, which met in Washington last week; the other on the "Lacerations of the Female Sexual Organs," for the Obstetrical section of the American Medical Association, which met in the same city during the present week. Though well-nigh fourscore years of age, he has never allowed the great mind which has guided the surgical world to become for one moment idle.

As a companion and as a host, Dr. Gross was one of the most genial and generous of men, and few who ever heard his voice will forget its majestic power and sweetness. As a writer he was voluminous.

In 1843 he published "An Experimental and Critical Inquiry into the Nature and Treatment of Wounds of Intestines," and it is a curious coincidence that just forty-one years afterward he should contribute a paper on this subject; in 1851, "A Practical Treatise on the Disease, Injuries and Malformations of the Bladder;" in 1854, "A Practical Treatise on Foreign Bodies in the Air Passages," and the same year he issued a "History of Kentucky Surgery." In 1859 he published his noblest work, "A System of Surgery, Pathological, Diagnostic, Therapeutic and Operative," the sixth edition of which was put out in 1882. At the outbreak of the war Dr. Gross issued a "Manual of Military Surgery," which passed through two editions and afforded important service in fitting young mili-

tary surgeons for the better and more efficient discharge of their duties on the field and in the hospital. In 1861 he edited a large volume entitled "Lives of Eminent Physicians and Surgeons of the Nineteenth Century." In 1876 he published a "History of American Medical Literature from 1776 to the Present Time," and the same year an elaborate paper entitled "A Century of American Surgery."

In addition to the comprehensive standard works already mentioned, Dr. Gross also made many other noteworthy contributions to the literature of the medical profession, chiefly in the form of monographs and miscellaneous papers, contained in the current medical press of the country.

Dr. Gross leaves four children, upon one of whom, Professor Samuel W. Gross, now gracefully rests the mantle so long worn by his distinguished father, as Professor of Surgery in Jefferson College.

In addition to his numerous titles from American and British institutions, he was member or fellow of several foreign societies, including the British Medical Association, the Imperial Medical Society of Vienna, the Royal Medico-Chirurgical Society of London, and the Clinical and Pathological Societies of London.

Dr. Gross was the first to suggest and perform the operation of wiring the dislocated clavicle to the sternum, or acromium process; the suturing of divided nerves and tendons; deep stitches for wounds of the abdomen; the direct operation for the radical cure of hernia by suturing the pillars of the ring; an operation for the cure of neuralgia in old persons, and a modification of Pirogoff's operation; and was the first to describe prostatorrhœa. Eminence in medicine, whether as an art or science, requires labor which demands the most untiring industry, and a high order of talent. In neither of these requisites was he wanting, and whether progress in medicine be regarded as the history of the profession or the development of the curative art, it would be impossible to omit the history of his untiring and fruitful labors. Profoundly learned in all the anatomical, medical and philosophical lore of his own and former times, there was lacking in him no quality requisite for an encyclopædic writer, whether in the literary or professional world. Of him, as of the father of modern medicine, it may be said that, "finding medical science confounded under a multitude of dogmatic systems, he appears to have made it his object to reform these evils, to reconcile scientific requirements and practical skill, to bring back the unity of medicine as it had been understood by Hippocrates, and at the same time to raise the dignity of medical practitioners."

There are epochs in the history of medicine with which famous and undying names are inseparably associated, and there are great names belonging to special departments in medicine. But for Dr. Gross, no one great operation is called by his

name, nor was it his choice to make his own limits in the great field of medicine. His fame will rest securely on that highest work of having guided the current of medical science into new channels, and leading it into more fruitful fields by directing attention to the internal and real conditions of disease. His introduction of the study of morbid anatomy into this country makes him the bridge which spans the chasm between the epochs of the exclusive study of symptoms and the latter efforts to find the cause of diseases by thorough scientific study. In his life was summed up the progress of medical learning, the elevation of his profession, and the extension of the limits of medical knowledge.

THE BITE OF AN EPILEPTIC.

A young Englishman who assisted a woman who had fallen in fit, and was convulsively biting everything within reach, received a bite on the hand and died three days afterwards. This occurrence has drawn attention to the danger of injury from the bite of a human being while suffering from a fit, and has occasioned much needless alarm and anxiety. In commenting on this case in the *Lancet*, the writer thinks in all probability the man who met his death in this way would have fallen a victim to any other injury producing an equal strong impression on his body and mind. And adds: "There is no poison in the bite of a person, in a fit, as there is in the bite of a rabid dog. Many scores of attendants on epileptics are bitten and nothing comes of it. Any wound may set up serious irritation, or erysipelatous inflammation may supervene, with the result of placing life in imminent peril, or terror may kill. It is, of course, desirable that every care should be taken to avoid the bite of an epileptic, as it is also that of any excited or enraged creature, but there is not the slightest ground for supposing that worse consequences will follow an injury of this class than one of any other description, if it be equally severe and is attended to on the part of the victim by a morbid state of the constitution."

CONDENSATIONS.

THE fifty-second annual meeting of the British Medical Association will be held in Belfast, on Tuesday, Wednesday, Thursday and Friday, July 29 to August 1, 1884. Local Secretary, John Moore, M. D., Number 2 Carlisle Terrace, Belfast.

IOWA is no better off than Michigan. Recent legislation in surrounding States has driven swarms of "flushed" quacks into these havens, where, with Quaker liberality they are allowed to kill the inhabitants, each one according to his own convenience.

THE witty use of a quotation often saves one the trouble of answering a difficult question. A *Record* correspondent says Professor Huxley was once asked by a clergyman to explain, in the light of evolution, how it is that the Jews continue to be born with fore-skins, notwithstanding the fact that circumcision has been practiced among them for thousands of years. The naturalist answered aptly: "There's a divinity that shapes our ends, rough hew them how we will."

WHY have not the poor benighted "Lords of Creation" the same protection now that was given them during the past century? A French state paper brings to light a decree that was solemnly passed by Parliament and duly registered under King Louis XV, that: "Whosoever, by means of red and white paint, perfumery, essence, artificial teeth, false hair, cotton wool, iron corsets, hoops, shoes with high heels, or false hips, shall seek to entice into the bands of marriage any male subject of His Majesty, shall be prosecuted for witchcraft, and declared incapable of matrimony."

THE heated season which is now upon us, with remarkably cool nights and excessively hot days, specially favors the production of that series of diseases known collectively as summer complaints. The child and the aged suffer most from these troubles of the alimentary canal. In the vast majority of cases these diseases are due to a lack of proper relationship between the digestion and food. The general impairment of the vital force produced by the depressing influence of summer heat increase the natural weakness of the child's stomach, and augments the want of tone in the intestinal structures of the aged patient. While the diarrhœa and vomiting may be, in a measure, controlled by the administration of bismuth, vegetable astringents, opium, etc., the relief is not permanent. When a patient in either the extremes of life has once suffered from an attack of a summer disorder, there exists a predisposition to renewed attacks. Particularly in cases of *cholera infantum* is this found true. In this disease, while the greatest care may be taken in selecting the most appropriate articles of food, the symptoms in a great majority of the cases will return in a few hours. Impaired digestive powers, are clearly the producing cause, and unless these powers are strengthened by artificial aids, the nourishment given will only cause relapse. There is no remedy that seems so efficient as lactopeptine to assist the weakened stomach to properly digest food for assimilation. It may be given either alone or in combination with the sub-nitrate of bismuth. A convenient way to give it to children is to mix it with their food, but it is probably more efficient when given a short time after food has been taken.

NEW PUBLICATIONS.

ELEMENTARY PRINCIPLES OF ELECTRO-THERAPEUTICS.

For the use of Physicians and Students, with one hundred and thirty-five illustrations. Prepared by C. M. Haynes, M. D., Chicago. Published by the McIntosh Galvanic and Faradic Battery Company.

This work, while it is designed to show the application of the many electric and galvanic appliances, and the various batteries manufactured by the well-known McIntosh Galvanic and Faradic Battery Company, contains much valuable information on electro-therapeutics. The full vocabulary and glossary of technical terms pertaining to the science is a convenience that will be appreciated by the reader.

In the introduction a brief resume is made of the history of electricity and its past various practical applications. In preparing the work, Dr. Haynes has consulted the writings of a long list of authors, and the facts and principles which he has compiled from these various sources, are ably woven together with much original information.

Chapter I pertains to magnetism, and while it contains some information which is so familiar that it could well have been omitted, the laws and principles of the study are clearly and concisely stated.

The second chapter explains frictional or static electricity; its forms and laws; the history and explanation of static machines; its physiological and therapeutic effects. The superiority of Mr. Atkinson's Improved Töpler Electric Machine is prominently noticed, with the methods for using it, and the various therapeutical applications of the current generated.

The chapter on galvanism explains the voltaic pile; the cell; compound battery; the various circuits; polarization; electro-motive force; the materials of which elements are composed, and the relative value of various combinations; instruction how to prepare, keep in order, and use a battery.

The fourth chapter treats of electrolysis; its laws, and effects on animal tissue; the batteries to be employed, and the diseases in which electrolysis is employed; its danger and exact value.

The advantages of galvano-cautery over the ordinary hot iron are plainly stated; with an enumeration of the various diseases, in which it is most applicable, at the same time valuable suggestions are given regarding the requirements and construction of galvano-cautery batteries.

The subject of Faradism, the Faradic currents and their employment, is more fully considered than the preceding topics.

The various electro-thermal baths, with instructions how to prepare them, are carefully detailed.

Electro-Physiology, Electro-Diagnosis and Electro-Therapeutics are separately treated.

MEDICAL DIGEST.

TREATMENT OF VIOLENT DELIRIUM IN FEVER CASES.

Physicians are not unfrequently sorely puzzled, regarding the successful management of the unfortunate features of some forms of fever. Some individuals become delirious with the slightest fever, and in the severer forms of febrile disease, they become violent and furious. To control patients during these periods of complete mental derangement constitutes one of the most difficult requirements in the treatment of fever cases. For the milder forms, Dr. Allen, of the Glasgow Fever Hospital (*Lancet*, December 15, 1883), thinks are best met by such gentle measures as shaving the head, applying evaporating lotions to the scalp, sponging the skin with lukewarm water and vinegar, etc. That form common in typhus and enteric fevers, in which the patient wants to get up, to go to work, or to go home, when it is imagined that he is in a strange place, can generally be controlled by a skillful nurse, with persuasion and gentle restraint. When the patient persistently insists on sitting up in a chair, or going around the apartment, he has seen the best possible results come from allowing these whims to be gratified. The patient returns to bed, is tired and satisfied, and drops into a refreshing sleep. Those cases in which the delirium assumes a fierce or wild character, the management is much more difficult. When these fevers take on a pulmonary complication, this maniacal delirium is of the worst form. In these cases, if it comes on early in the disease before the strength is impaired, in strong muscular men, it is a source of great trouble for those having charge of the patient. Of these cases Dr. Allen writes as follows:

"As a rule, the patient is in a state of terror or apprehension. He thinks that he is in danger of being murdered, or he believes that he is about to be consigned to hell-fire. He is simply desperate, and this constitutes the great danger of the case. Sometimes he is cunningly planning his escape. At this stage he must be closely watched. There is a peculiar look about his eye, not easily described, but once seen is readily recognized again. There is also a change of manner; questions are answered abruptly or an obstinate silence is maintained. The man is in a dangerous state; a violent attack may occur at any moment. Every trivial action, every careless word of the attendants, has for him a sinister meaning. Without warning he may spring from his bed and dash through a window. The probability is that the patient has not slept for some time, and recognizing his dangerous condition, the medical attendant is anxious to administer a draught, so as to secure deep, refreshing slumber. But to his great annoyance, the patient abso-

lutely and doggedly refuses to swallow, and for the very good reason that he believes an attempt is being made to poison him. It may be that the attempts to get him to swallow the draught have roused the man to active resistance, and his violence may be so extreme as to necessitate the help of several persons and the application of mechanical restraint. The latter should never be resorted to when it can possibly be avoided; but when it must be done let it be done quickly and effectively. The patient should be gently but firmly overpowered, when as a rule, feeling helpless he will submit."

In the further handling of these cases, Dr. Allen used the "jacket" and "sheet." If he still refuses to swallow, in some cases a hypodermic injection of morphia might be given, but should be guardedly used from the tendency of it causing, in fever cases, local irritation, abscesses, boiles, etc., and besides the pain inflicted by the thrust of the needle, though slight, would confirm the patient in his belief that he was in the hands of the enemy. He recommends morphia suppositories to be given until he is quiet. Then remove the "jacket and sheet" and put on warm flannels. Hydrate of chloral, in doses of twenty or twenty-five grains in syrup, when there is simple insomnia. In violent cases in addition to the chloral, five or ten minims of solution of muriate of morphia. Respiratory embarrassments, lividity of nails, etc., are serious contra-indications to the use of narcotics. When suppositories and draughts are both given the combined dose should be well borne in mind. In the treatment of violent delirium in fever, narcotics wisely given may save life; improperly given they may hasten or even directly cause death. In prescribing them no routine practice can be adopted, and their administration demands the most careful personal supervision of the physician in attendance.

ON THE SUBCUTANEOUS INJECTION OF IRON.

Dr. Glaesceke has made a number of experiments on animals with iron salts, by injecting them subcutaneously into animals, and testing the amount of iron in the various organs by analysis. He found that the citrate of iron is most easily and certainly absorbed. It causes no local irritation at the point of injection, and the completeness of the absorption is seen by the fact that when the point of injection is examined microscopically after twenty-four hours, only traces of iron can be found in it. Ferrous sulphate is rendered easy of absorption by the addition of twice or three times its weight of citrate of sodium. Peptonized iron is badly absorbed, and ammoniated sulphate of iron is not absorbed at all. The greater part of the citrate of iron absorbed into the system is quickly excreted again, chiefly by the kidneys, and in small quantities by the liver; but a certain relation exists between the excretion by

these two organs. The pancreas, the glands of the stomach and intestine, and the salivary glands, take no part in the excretion. The excretion through the urine begins about half an hour after the injection, is greatest in two to four hours, and is completely finished in twenty-five hours. Iron always occurs in the ferrous condition in the urine, in whatever form it may have been injected. Normal bile contains it in a ferric form, and the increase which occurs in its iron after an injection is generally ferric, though a trace of ferrous salt makes its appearance. As mere traces of ferrous salts occur in the bile, the author is inclined to think that iron always occurs in a ferric condition in the body; the ferrous condition in the urine being due to reduction taking place. The serum of blood and the peritoneal fluid contained iron both in the ferrous and ferric form in from one to six and a half hours after the injection. The aqueous humor never contained much, and the author thinks this is a proof that the iron exists in the blood only in combination with the albumen, which is absent from aqueous humor. The iron can be detected in the kidneys after its excretion has apparently ceased, and it may be found so long as three days after the injection. The appearances observed may be divided in two groups; the one occurring less than nine hours, and the other more than nine hours after the injection. In all kidneys the glomeruli are invariably free from iron. The appearances presented later on after the injection are simpler than those found earlier; in the former case isolated, contorted tubules, especially those lying near the surface, are found filled with iron, sometimes in the form of large lumps, which completely fill the lumen; in other instances it appears as granules. Earlier after the injection a great deposit of iron is seen in the cortical substance, and also in the medulla. In this case the iron is not only contained in the lumen of the tubules, but in the epithelium also, in the form of fine black granules, which in the medulla always lie in that part of the cell nearest the lumen. A number of straight tubules and Henle's loops are plugged with masses of iron, and some of them exhibit a diffused green coloration of the epithelium with blackening of the nuclei. From these appearances it is evident that iron is excreted, not by the glomeruli but by the epithelium of the contorted tubules, in the same way as Heidenhain has shown to be the case with indigo-sulphate of sodium. The appearances in the liver also may be divided into two groups, corresponding to the time after injection. In the first nine hours, or less, after the injection, all the cells are diffusely colored and granular; later on only the cells of the peripheral parts of the lobules are diffusely colored without containing granules, and toward the end of the process of excretion only a few cells exhibiting such coloration are to be found irregularly scattered on the peripheral parts of the lobules. The author

explains these appearances, it is first absorbed by the liver directly, as well as in a fluid condition from the blood-serum, and forms iron-albuminates with the albuminous bodies of the cell, and these take the form of fine granules. They remain only temporarily, and then again becomes soluble and is excreted with the bile. The subcutaneous injection of iron has no influence on the amount of iron in the spleen, and in the medulla of the bones. In the treatment of patients the author has generally used citrate of iron. The subcutaneous injections should be made into the muscles of the back or of the nates; the needle should be sharp, and the syringe always disinfected with carbolic acid. The solution of iron should be clear and not more than a month old. When these precautions are taken, no unpleasant feeling is produced, beyond a little burning lasting about ten minutes, and a tenderness lasting for about twenty-four hours. The pyrophosphate of iron with citrate of sodium is not so good as the simple sulphate of iron. The dose for adults is one and a half grains, and the solution should be of the strength of ten per cent. Larger doses cause symptoms of poisoning, namely, general discomfort immediately after the injection, with vomiting after twenty or thirty minutes, and languor for several hours.

The result of this mode of treatment was very satisfactory, especially in one case of extreme cirrhosis and one of anæmia due to bleeding from the stomach. In cases of nephritis, however, the treatment was of little use.

SIR WILLIAM PAGET'S PRECAUTIONS TO PREVENT POST-PARTUM HÆMORRHAGE.

At the close of an article in which Dr. Paget, of London, reports a case of post-partum hæmorrhage being immediately stopped by an injection of hot water, he states that he has almost invariably noticed that the cases of hæmorrhage which have produced anxiety have been those in which he had difficulty in bringing about respiration in the child, and consequently had been compelled to give up control of the uterus to the nurse. In his opinion very few nurses have an intelligent appreciation of how to accomplish this effectually; they usually allow the uterus to ride up under the hand, and then pressure does more harm than good. He submits the following points which are calculated to reduce to the minimum cases of this kind: (1) the administration of plenty of nourishment during labor; (2) in a suspicious case, a dose of reliable ergot just before the child is born, or a hypodermic injection of ergotine, especially applicable if the patient be under chloroform—even in a primiparous case this is admissible, if the forceps be applied; (3) take care not to push the chloroform too far,

remembering the tendency to profound unconsciousness and relaxation after the child is born; (4) when the head is born, naturally or instrumentally, leave the rest of the body to be expelled naturally, making firm pressure upon the abdomen, and carefully following up the breech—never remove the hand from the abdomen, but leave the tying of the cord to the nurse; (5) do not hurry to extract the placenta, but allow the patient to rally, and rather squeeze it out by pressure with the left hand than pull too much on the cord; lastly, give a dose of ergot when the placenta has come away, and in every case where there is a doubtful contraction, keep up the pressure for a considerable period, giving the patient in the meantime some nourishment and stimulant, if necessary. He believes, if these rules are followed, hæmorrhage will be a rare event.

THE ACTION AND USE OF COTOINE AND PARACOTOINE.

The coto bark has been used in diarrhœa, and as it has no proper astringent action, its utility has been ascribed to an antiseptic action by which it diminishes the formation of irritating products in the intestines. Professor Albertoni has investigated the action of the coto alkaloids, and that although cotoine somewhat lessens putrefaction and the development of bacteria, it does not stop them either in the organism or outside of it. He finds, however, that it has a very peculiar action on the vessels of the intestine. By keeping up artificial circulation in a loop of intestine by the method employed by Ludwig and Salvioli, he was able to estimate precisely the rôle of the blood-flow.

Cotoine dilates the arteries, causes the blood to flow more readily into the veins, and preserves the vitality of the intestine. It also dilates the vessels of the kidney, and causes the blood to flow more rapidly through them. When injected into the jugular vein it produces an active hyperæmia of the intestine, but does not alter the circulation in the submaxillary gland. It causes the temperature of the peritoneal cavity to rise.

Opium and chloral also dilate the vessels of the intestine, but their action is a paralyzing one, while that of the cotoine is not. The action of paracotoine is similar to that of cotoine, but less marked.

Coto bark has been used in the form of powder and tincture in various kinds of diarrhœa, such as that occurring in rickety children, in typhoid fever, in intestinal catarrh, and in phthisis. Albertoni has employed it with good results in diarrhœa occurring in the insane, although it was of little service in advanced cases of general paralysis. In chronic intestinal catarrh he has found it exceedingly useful, but it has been of no service in the diarrhœa of drunkards, or in diarrhœa depending upon obstruction of the portal circulation, as in cases of cirrhosis of the

liver. In the diarrhoea of phthisis he found it exceedingly serviceable, though it does not always arrest it. In the diarrhoea of pellagra, cotoine proved curative where other drugs had failed. In diarrhoea of children he has found it useful, like former observers. A contra-indication of its use is a hyperæmic condition of the intestine and tendency to hæmorrhage from it.

Cotoine should be given in large doses,—two and one-half to three grains; this is of especial importance in treating diarrhoea in children. He gives it either as a powder or in solution; the powder is administered in a wafer or mixed with some mucilaginous vehicle. For the solution he gave the following formula:

R. Cotoine.....	0.40 grammes.
Bicarb. of sodium.....	1.00 grammes.
Water.....	100.00 grammes.
Glycerine.....	20.00 grammes.

The mixture is to be warmed, the cotoine become nearly, though not entirely, dissolved.

The observations that he has made with paracotoine show that it has a similar action, though less powerful than that of cotoine. In regard to the mode of action he thinks that the benefit which cotoine produces in diarrhoea is due to the dilatation of the intestinal vessels it causes, and the increased power of absorption which it gives. He considers that, in many cases of diarrhoea, diminished absorption is a most important factor.

A combination of cotoine with large doses of subnitrate of bismuth will probably be of great service.—*Archiv für exper. Pathology und Pharmacy.*

THE CLINICAL SIGNIFICANCE OF ALBUMINURIA.

In the Glasgow Pathological and Clinical Society, February 19, Dr. Mortimer Granville expressed the opinion that the influence of the nerves of the kidney, in their connection with, and relation to, the cerebro-spinal centers, more particularly the vaso-motor center, and the sympathetic system, as illustrated by the known experiments of physiologists, to which he briefly alluded, supplied a sufficient explanation of the occurrence of albuminuria without kidney disease in cases which could not be classed as instances of "physiological albuminuria," or described under any special heads, such as "the albuminuria of puberty," "the albuminuria of adolescence," etc. The author then directed attention to two not generally recognized classes or groups of cases in which albumen frequently occurred in the urine without organic disease. First, there were cases of young men in which the genito-spinal center had been debilitated and rendered preternaturally excitable not necessarily by

sexual excess, but by the struggle to repress and restrain the passions, a mental and nerve-center excitement which might be so wrought up as to prove as mischievous in its effects as excess or abuse. In these cases, he said, albuminuria frequently occurred, and was either overlooked or wrongly regarded as evidence of kidney disease; the latter mistake being the more likely to be made, because there were frequently pains in the region of one kidney, generally the right, and, as often happened when neuralgia of viscera was accompanied by vasomotor disturbances, "pain on pressure." The second class of cases to which he directed attention consisted of studious or sedentary men of middle age, who suffered from mental depression and "nervousness" with, perhaps, agoraphobia or claustrophobia, or both. In these cases albumen was often found in the urine, and, in some instances, its appearance alternated with that of sugar in small quantities, pointing significantly to the location of the excitement or the glance of the reflex, and suggesting the fact of nerve-center disturbance as the cause of the malady. He pleaded for the recognition of these varieties of albuminuria, without kidney disease, and, insisting strongly on the scientific error of placing the albuminuria in the first of these cases, with the result of creating needless alarm, and in too many instances producing grave mental depression, urged a wiser and better use of the urinary test-box, recommending that the urine of all patients should be examined both for albumen and for urea. Under this more extended practical and more precise method of research, he believed it would be found that albuminuria without kidney disease was by no means uncommon.

SURGICAL USES OF COLLODION.

Mr. Samson Gamgee writes (*Birmingham Medical Review*): Collodion is one of those therapeutic agents of which the value to the surgeon is admitted, without being adequately appreciated or utilized. Composed of ether, gun-cotton, and spirit, collodion is a powerful anti-putrescent, and by ready evaporation and contraction it exercises the dual antiphlogistic power of refrigeration and compression. In acute orchitis I know no plan of treatment so simple, rapid and satisfactory as coating the cord and scrotum with layers of collodion by the aid of a camel's hair brush previously dipped into it. The sensation is momentarily sharp, the shrinkage rapid, and so is the subsidence of the inflammatory process—facts pointed out some thirty years ago by Bonnafort, but much doubted and almost forgotten. To swollen parts which cannot be well bandaged collodion is especially applicable for the compression attending its contraction. I was lately consulted in the case of a good looking boy, considerably disfigured by a red and swollen nose, which

became very pale and visibly contracted after I painted it with successive layers of collodion. I repeated the application three times in the succeeding fortnight, with the effect of producing shrinkage of the organ to its natural size and color. When the nasal bones are fractured a very effective mold for keeping them immovable, after adjusting them with the fingers, may be thus made, place over the nose a thin layer of absorbent cotton soaked in collodion; as it dries, another layer of cotton and more collodion, taking care that the application extends sufficiently on each side to give buttress-like support. The patient compares the feeling to the application of a firm bandage on the nose, and the bones consolidate effectively under the shield, which may be renewed as it cracks and peels off.

Other cuts than recent ones do well under collodion. A horse breaker sought my advice for a grazed wound inflicted by a carriage step on the front of his right shin, ten days previously. He had applied water-dressing continuously. The surface of the sore had suppurred, and its edges, for some distance around were red and tender. I raised the foot to empty the limb of blood, dried the surface of the sore with absorbent tissue, then brushed it over with collodion, and applied a smoothly compressing bandage over one of my pads. The part was easy at once, and with two more dressings at intervals of four days, cicatrization was perfect, the patient having continued his business of riding and driving without losing an hour.

DEFENCE OF THE PLASTER JACKET IN CARIES OF THE SPINE.

Dr. Sayre, of New York, communicates to the *British Medical Journal* a reply in defence of the plaster jacket, to charges made against it by Mr. Noble Smith in former numbers of that journal. Mr. Sayre claims that a properly applied plaster of Paris jacket does secure rest of the diseased parts and at the same time relieves the parts from undue pressure, without any interference to the normal free thoracic respiration; that it furnishes support to the upper part of the spine; that it prevents any incurvation below the seat of the disease, and thus prevents the diseased surface from being "pressed and rubbed together;" that it, as easily as any other appliance, can be removed when necessary. To other exceptions to the jacket he replies as follows:

"He (Mr. Smith) further states that the instrument should form a back-splint which will act as an immovable artificial spine, and the real spine is to be fixed by fastening the shoulders (drawn backwards) and the abdomen and the pelvis to the splint: 'If the artificial spine be thus secured by an inflexible and inelastic bar running from the pelvis to the shoulders, and

fixed in that manner, the natural growth of the child will be prevented, and this of itself would cause undue pressure upon the diseased parts, and prevent the natural normal elongation of the patient. Plaster of Paris jackets do not *thoroughly fix* (italics are mine) 'the spine.' They do not fix it so as to prevent the normal growth of the child; but they do secure such fixation as to prevent any injurious or painful movements. 'They interfere with thoracic respiration.' This I most emphatically deny, from observation of many hundreds of cases. 'They allow the accumulation of dirt.' This is always owing to the neglect or carelessness of the surgeon applying it, and of the persons having charge of the patient. 'They interfere with perspiration.' This is not correct, for the plaster jacket is porous and allows the insensible perspiration to pass off freely; and that is one of its principal advantages over the felt, silicate of soda splint, or any other impermeable substance. 'They often cause constant discomfort.' They never should cause the least discomfort; and if such be the case it is due to the improper application of the jacket, and it should instantly be removed and a new one properly applied. 'They obscure the region of the disease and hide ulcers and abscesses when these form, and cannot practically be altered sufficiently often.' There is no occasion for looking at the seat of the disease every day any more than there would be to take down a fracture and look at that every day. When a man puts a seed of corn in the ground, he knows better than to take it up every day to find out if it be sprouting. If the jacket be properly applied no ulcers ever occur, and if abscesses form they are easily discovered, and a proper fenestra is made in the jacket at the time of its application, the same being renewed as often as necessary."

The description given by Mr. Smith of the instrument devised by Mr. Chance is very vague and uncertain; and as there is no drawing of it, it would simply appear to act on the same principle as the splint of Drs. Taylor and Shaffer, namely, by pressing the weight of the back upon the transverse processes of the spine, in order to relieve the anterior portion of the vertebræ from pressure. The only advantage over Dr. Taylor's brace appearing to lie in it is, that it is secured at the shoulders, and does away with Dr. Taylor's body-belt, or apron, as it is called, which materially interferes with thoracic respiration, and is one of the serious objections to it. But in disease of the cervical vertebræ, Mr. Smith's appliance would be utterly useless, as it does not support the weight of the head. "No instrument will be of much use unless the surgeon devotes his attention to its adjustment and readjustment." I agree with these statements most fully; and there is no instrument that will give the patient the same support and comfort as a properly applied plaster of Paris jacket and head rest, and that will require readjustment less frequently.

ALUM IN HÆMATURIA.

Dr. J. S. Radcliffe communicates to the *Philadelphia Medical News* a case of severe hæmorrhage from the kidneys successfully treated by a solution of alum.

The paper states that the patient, a lady, aged twenty-five, had suffered from malarial disorders, and that there was a family history of heart disease and rheumatic fever. At the time of the attack, however, the temperature was but slightly raised, and the heart sounds were normal. Although the hæmaturia came on suddenly, with paroxysmal pain in the right lumbar region and with nausea, it is curious to note that the urine remained bloody for nearly three weeks. During this time, almost all the astringents were tried with no beneficial effect. The patient was first given gallic acid alone, then in various combinations, the acid with quinine, with ergot, with sulphuric acid, with opium. She also took tannic acid, sugar of lead and opium, fluid extract of ergot, infusion of buchu and matico, muriated tincture of iron, and with this quinine; extract of logwood, and extract of Hamamelis. Ice was employed internally and externally, and counter-irritation, by sinapisms and blisters was used. The Hamamelis appeared to lessen the hæmorrhage slightly, but for the rest, Dr. Radcliffe says "it appeared as if I might as well have given her so much cold water." Rockbridge water was then used on theoretical grounds, champagne—glassful draughts being taken every three hours. Beneficial effects were manifested with the third dose, and on the fourth day the urine was free from blood corpuscles, and on the sixth day it was normal in color, quality and quantity. It merely remains to add that the Rockbridge alum water appears, from an analysis appended to this paper, to be remarkably rich in aluminium sulphate, and to contain very appreciable quantities of calcium and magnesium sulphates, free sulphuric acid and cilicic acid.

It is said to have been employed with benefit in chronic discharges, such as diarrhoea and broncorrhœa.

ADMINISTRATION OF SALICYLIC ACID.

From *Squibb's Ephemeris* the following extract is taken by the *Medical Times*:

The apyretic effect of salicylic acid is one of the most remarkable and important therapeutical discoveries of our age, and with its control over all such conditions as are generally met with in acute and subacute rheumatism, is almost complete. Its applications, therefore, in medicine are very numerous and very important. In its internal use, the points necessary to be borne in mind are the disturbing effects of

very large doses, and the rapidity with which it is eliminated. It should, therefore, be given in full doses at first until the impression is made, and then in moderate or small doses frequently repeated. It is best given in wafers or cachets, and it should not be packed in capsules—two or three doses of fifteen to twenty grains, with two or three hours intervals, will usually produce its characteristic beneficial effects. Then ten grains every two hours, with intervals gradually increasing to three and four hours, will serve to keep up the effects with the smallest risk of such disturbance as will require it to be suspended when most needed. Of late it has been more rarely used, the salicylate of sodium having taken its place with the same effect, and with some advantages.

It is a curious and very important circumstance, that full doses of the acid or salicylate do not interfere with the digestive functions of the stomach, and yet a very small quantity will prevent the action of pepsin. At least this statement is made on what appears to be very good authority. An ordinary cold saturated solution contains somewhat about one part in three-hundred; and such a solution is very convenient as a vehicle of solutions of alkaloids for hypodermic use. If a drachm of the acid be added to a pint of water and the mixture well shaken, such a solution, with some undissolved acid at the bottom of the bottle, will be the result. Then, if this be used entire, or diluted with an equal portion of water, for making hypodermic injections, such a solution will remain free from growths of all kinds for an indefinite length of time, and will not be more irritant than when made from water alone.

DIGESTION WITHOUT A STOMACH.

The editor of the department of physiology in the *American Naturalist*, makes the following interesting abstract from the *Archiv f. Anatomie u. Physiologie*:

M. Ogata describes some remarkable experiments upon the digestive powers of animals in which the influence of the stomach was nearly or completely excluded. A dog was submitted to an operation in which the whole of the stomach was removed except a small part of the wall near the cardiac entrance of the organ. The free edges of the alimentary tube were sewed together, the animal completely recovered from the operation and was killed six years after for the purpose of postmortem examination. During that period the dog remained in perfect health, gained in weight and readily digested the most various food matters. The feces were quite normal in character. Ogata studied the subject farther in various ways. In dogs possessing a gastric fistula food matters of different kinds were introduced, by means of a tube passed through the opening in the stomach wall, directly into the duo-

denum, the gastric juice being prevented from passing the pylorus by means of an appropriate plug. When mixed tissues such as pieces of liver, lung or intestinal mucous membrane were thus introduced into the duodenum, it was found that the cellular or albumen-containing elements were most readily dissolved, while the collagenous and reticular tissues were comparatively unaffected. Elastic tissue was also dissolved, but more slowly than the first named. With vegetable substances it was found that the cell contents were dissolved while the cell walls, though apparently offering no great resistance to the diffusion of the intestinal juices through them, remained undigested. A number of dogs were fed in the way described with meat or eggs and killed in a painless manner at different times after giving the meal. It was found that the food in each case had provoked active secretion of the alkaline fluids of the pancreas and intestine, and that a large amount of material was digested and absorbed within two hours after feeding. The conclusion arrived at is that albuminous bodies and cooked connective tissue are digested as thoroughly and speedily by juices poured into the intestine alone as by the secretions of the stomach and intestine together. In these digestions there seemed to be a very limited flow of bile. Comparative experiments showed that albuminous substances were digested much more completely and speedily in the intestines alone, and such food matters were digested more rapidly when brought directly into the intestine than when taken in the natural manner by the mouth.

THE REMOVAL OF THE AFTER-BIRTH.

At a stated meeting of the New York Academy of Medicine, held April 3, 1884, a scientific paper on the above title was read by Dr. H. J. Garrigues. When the author became connected with the Maternity Hospital, he introduced into his wards Cr  de's method of expulsion of the placenta which was first described thirty years ago. This method only increases the power of normal contraction of the uterus by which the placenta is expelled; it closely imitates the natural contraction and movement of the uterus, shortens the third stage of labor, aids muscular contraction, and thus contracts h  morrhage. There was post-partum h  morrhage in only two of four hundred and eight cases, and in those it commenced directly after birth of the child, and was not due to attempts to deliver the placenta. It was important that the uterus be seized from all sides over the largest possible space, and that downward pressure be not practiced except after the womb has contracted. In the majority of cases the after-birth was not thrown entirely outside of the vulva, but when it was not it could be removed without introducing the finger into the vagina.

The distinguished features claimed by the author for Cr  d  's method over others were :

- (1) That it was used in all cases.
- (2) That the uterus was grasped from all sides with both hands.
- (3) That the placenta was squeezed out by the outside pressure during a uterine contraction.
- (4) That the cord and placenta were never touched, except in rare cases in which the placenta was really adherent and had to be pulled off from the uterine wall.
- (5) That the fingers were not introduced into the genital canal after delivery, when the damage of infection was much greater than before the passage of the child.

The advantage of this method were:

- (1) The certitude with which the desired end was accomplished.
- (2) The exact imitation of the natural processes.
- (3) The prevention of h  morrhage.
- (4) The prevention of hour-glass contraction.
- (5) The prevention of inversion.
- (6) The prevention of avulsion of the cord or of the uterus itself.
- (7) The prevention of infection.

The method of pulling upon the cord was attended by corresponding disadvantages. The method now practiced by some in Germany, of non-interference, had many disadvantages and no redeeming qualities. It was not natural that the placenta remained in the genital canal for some hours after detachment, and if the patient were in the savage state she probably would get up soon after the birth of the child, and the after-birth, having become detached, would fall out of its own weight. On the contrary, as the patient in civilized life usually lies in bed after delivery, it might remain in the canal for some hours before it came away.

INFLUENCE OF IODOFORM ON BODY-WEIGHT IN PHTHISIS.

At the last annual meeting of the British Medical Association, a paper was read by Dr. A. Ransome, in which he gave the results of the use of iodoform in the treatment of phthisis in the Hospital for Consumption, of Manchester. At first his patients, especially women, were nauseated, and their digestive organs impaired. But when given in the form of pill, a grain and a half three times a day, all his cases were able to take it. Later, at the suggestion of Dr. Marh, it was combined with two grains of croton-chloral, when it was much better borne. Iodine and iodoform inhalations were also prescribed as a general test of its influence upon the disease. The cases were not selected, and it was given in all stages of the disease. The

largest number of cases were in advanced stages. Of twenty-one cases recorded, four were in the first, five in the second, and twelve in the third stage of the disease.

Of the four cases in the first stage three appear to have received benefit; one gained two and one-half pounds in three weeks, and maintained her position for at least six weeks afterwards; another gained two pounds in about one month, and although she lost weight somewhat on discontinuing the drug, she regained it again when the pills were recommenced. A third case gained eleven pounds in four months, and was then lost sight of. The fourth lost weight on the whole to the extent of eight pounds in three months.

Of the five cases in the second stage of the disease, number one was losing weight rapidly when he commenced the treatment, at the rate of three pounds in a fortnight; he then gained one pound in the same space of time; lost weight on discontinuing the drug, gained again slightly on its recommencement, lost ground a third time on its omission, and entered on the third stage in about three months from the beginning of the treatment; but after again taking iodoform for several weeks, he improved and regained his former weight. Number two also took the drug intermittingly. He gained two and one-half pounds in ten days after first taking it; but after this it seemed to have little influence in arresting his downward course. Number three presented a similar history, except that in spite of sundry alternations of weight, he had on the whole gained somewhat in the course of seven months' treatment, during which time he had only omitted the iodoform for about three weeks. Number four was a case of chronic pneumonia, which developed into phthisis after a lapse of four months. He was losing weight rapidly when he commenced the iodoform pills; but since then he has gradually improved both in weight and in the condition of the lungs. Number five has only been a short time under treatment; but he has gained three and one-half pounds in the first fortnight.

Of the twelve cases in the third stage of the complaint, two have distinctly gained weight since taking iodoform. Six, after sundry variations, remain approximately at the same weight, several after six or eight months of the treatment. The remaining four have all diminished in weight, with more or less rapidity. It is, however, remarkable that even in these advanced cases, there is often a temporary rise for a short time after commencing to take the iodoform.

These results would indicate that the administration of iodoform in phthisis, is followed by improvement, even in the most hopeless cases. There is truly some encouragement to think that when given in the early stages of the disease its benefits would be greater. At least, it has given results of sufficient worth that it merits a further trial.

MISCELLANEOUS ITEMS.

PHYTOLACA is now pronounced to be unexcelled as an anti-fat agent.

ROUTINE in practice is never scientific, and is *liable* to be mischievous.

THE oleate of quinine is the best preparation for giving that drug by inunction.

DR. J. C. DA COSTA has been appointed gynæcologist of the Jefferson Medical College Hospital, to succeed Dr. F. H. Getchell, who resigned a short time ago.

DR. DA COSTA has found that in the hospital practice the bromide of nickle in small doses—five grains *ter die* has been remarkably efficient in the treatment of epilepsy at the menstrual epoch.

THE LANCET says: When cousins are healthy and have no proclivity to disease, they may marry, but the existence of strongly-marked scrofulous or other taint in the blood should prevent such marriages. This should also be a reason for the non-marriage of those who are not in any way related.

TO PREVENT CONCEPTION.—The *Australian Medical Gazette* gives some of the methods employed by the aborigines of Central Australia to prevent conception. One mode is to make an opening into the male urethra just anterior to the scrotum: another is to slit up the entire urethra, so as to entirely destroy the urethral canal from the scrotum to the base of the glans penis.

M. DIDAY says (*Medical Chronicle*) that in urethral stricture he has, in order to avoid confounding it with a spasm, and to overcome this if it exists, an infallible method. "When the end of the sound is in contact with the coarctated portion of the canal I suddenly put the following question to the patient: 'How long is it since you have been with a woman?' If it is a simple spasm the sound immediately enters."

DISINFECTANTS.—Dr. W. E. Buck writes to the *British Medical Journal*: Most practitioners must have often realized the inefficiency of disinfectants in allaying the foster of cancerous ulcers, an annoyance which sometimes troubles the patient even more than the pain, or the thought of death. After failure

with the whole round of disinfectants, I tried a saturated solution of hyposulphite of soda added to an equal quantity of water, and found it exceedingly efficacious. The ulcerating surface was well syringed and washed with the solution, and was then covered with rags steeped in the solution. Most disinfectants seem to lose their virtue after a few days' application, but I have used this for months in the same patient with continuous good effects. It is cleanly, has no smell, does not stain, and is very cheap.

BOILS, as treated by Dr. John Aulde, following the suggestions of Dr. Sidney Ringer, yield favorably and satisfactorily. The diet is to be regulated, and if constipation exists, a teaspoonful of magnesia sulphate in a glass of cold water should be taken every morning before breakfast.

R. Calcii sulphide grs. iij.
Sacch. lactis..... grs. xxx.

Misce true et div. in chart, number xxx. Sig. Five powders daily at intervals, between meals.

By this method, beginning boils will be aborted, and those far enough advanced to threaten a siege of several weeks and successive crops, will soften and heal in such short time that the patient will be surprised at the result. When they can be obtained granules containing one-tenth grain are to be preferred to the powders. The urine should be examined for sugar, as boils and diabetes often go together.

TREATMENT OF CHOREA.—In the course of a clinical lecture on chorea, Professor H. Nothnagel (*Medical Press*) remarked that when the disease followed articular rheumatism, salicylate of soda was given; this treatment had been pursued empirically and carefully, as nothing was yet known of the nature of the disease. Opiates had no effect; neither had calabar bean. Now-a-days potassic bromide was almost always given, but without any good result. As calmatives, and for the purpose of procuring sleep, morphia and chloral might be given. He had convinced himself by numerous experiments that propylamine was useless. Arsenic, in the form of Fowler's solution, was still the most effective remedy. It could be given by itself or in water. He suggested the following:

R. Liq. Fowleri..... grm. v.
Aq. distill..... grm. xv.

M. Five drops to be given in a tumbler of water immediately after meals, and the dose to be increased by three drops every day until it reached thirty drops, after which it was to be slowly diminished.

The constant current was another effective remedy in chorea, combined with tepid bathing, or the application of ice bags to the spine.

THE PHYSICIAN AND SURGEON

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ORIGINAL ARTICLES.

THE DRY TREATMENT OF CHRONIC SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.*

BY CHARLES J. LUNDY, A. M., M. D.,

Professor of Diseases of the Eye, Ear and Throat, in the Michigan College of Medicine,
Detroit.

MR. PRESIDENT AND GENTLEMEN: Within the past two or three years, the resources of the aural surgeon have been greatly increased by the introduction of new remedies, and also by the use of old remedies in a new way.

The so-called dry treatment of that disgusting and dangerous affection, chronic suppurative inflammation of the middle ear, has come into vogue, and in appropriate cases, the plan has proven highly beneficial.

All of you are aware that dangerous complications may arise in the course of a chronic suppurative inflammation of the tympanic cavity; and, doubtless, many of you have seen examples of caries and necrosis of the temporal bone, mastoid abscess, meningitis, cerebral abscess or death, which occurred as the result of a neglected suppurative otitis media.

I regret that my time and space will not permit a consideration of the *sequitur* of this disease or a discussion of the complications which may arise in its course, and the best means of managing them. Neither shall I attempt to discuss in a

*A paper read before the Michigan State Medical Society at Grand Rapids, June 11, 1884.

general way the treatment of the disease itself, nor all the remedies employed for that purpose, but shall confine my remarks to the so-called dry treatment of the affection. By way of preface, however, it must be said that all remedial complications must be removed before beginning the treatment of the tympanic inflammation. For example, if aural polypus or granulations exist, they should be destroyed or removed, and so it is also with removable pieces of necrosed bone, either in the mastoid or elsewhere. Should a mastoid abscess be present, it must, of course, be evacuated by operative procedure. The necessity of attending strictly to these points cannot be too strongly impressed upon the surgeon.

The advantages which the dry treatment of chronic suppurative otitis media seems to offer are:

- (1) The constant medication of the parts in a manner which is well nigh impossible by any other means.
- (2) The thorough and continuous disinfection of the parts and the destruction of micro-organisms.
- (3) The absorption of the discharges and protection from their irritating properties.
- (4) Protection from atmospheric influences.

The constant medication of the diseased surface can be best affected by remedies in the form of powder. If a portion of the powder becomes dissolved by the discharges, fresh particles of powder supply the place of that dissolved. Besides this, a much larger quantity of the drug can be thus applied, than it would be possible to use in liquid form.

The discharges from most ears affected with chronic supuration swarm with micro-organisms, and their destruction is a matter of much importance. This destruction can be more easily and more thoroughly accomplished by means of dry treatment than any other. It is true, remedies in liquid form can be advantageously employed, but if used of sufficient strength to accomplish the desired result, they may, and often do, irritate the ear. Then again the action of the remedy is not continuous, which it is when powders are employed.

The disgusting odor of the discharge is what drives the patient to seek relief, in many instances, and if the relief can be easily and speedily obtained, it inspires the patient with confidence, and he will give the physician an opportunity to accomplish a cure. The boracic acid powder, or the boracic acid and resorcin, very effectually destroys the foul odor of a suppurating middle ear, and either of them is less irritating than any equally effective agent that we can use in liquid form. The perchloride of mercury, another powerful disinfectant and germicide, may be used with boracic acid, or with bismuth. The discharge itself in many cases is very acrid and irritating. As a result of this we sometimes find inflammation of the dermal lining of the external auditory canal. It is practically

impossible to remove these discharges sufficiently often to prevent their accumulating in the auditory canal, and their presence is a source of much mischief and discomfort. Especially when eczema of the canal exists, do we find the bad effects of irritating discharges. In such cases, powders afford us a vast advantage over liquids. If the discharges are sufficient to irritate and inflame the dermal covering of the canal, they must also be a source of much irritation to the drum itself, and any means which will prevent such irritation must offer special advantages. The discharges can be absorbed to a considerable extent by the use of powders, and this is an important point in their favor. Of course a discharge may be so profuse as to render the action of the powder *nil*, because the powder may become super-saturated before it has had time to exert any beneficial influence.

That protection from atmospheric influence is a matter of much importance all will concede. It is an important measure not only in the treatment of chronic suppurative otitis media, but also in all cases of aural inflammation, especially if the inflammatory action is attended with discharge. A draught of cold air should never be allowed to blow upon an ear whose drum membrane is not intact. Of itself a draught of cold air is often sufficient to excite an acute inflammation of the ear, and if so, it must be capable of exciting a decidedly injurious influence when the membrana tympani is perforated. Then germs, dust, etc., may be carried into the tympanic cavity if it is not protected. Now, the use of powders affords us complete protection from the injurious atmospheric influences, and, indeed, some aural surgeons believe that this protection is the chief advantage which the dry treatment possesses over the moist.

I do not pretend to claim that powders should be used to the exclusion of remedies in other forms, and it must be admitted that, in certain classes of cases, the dry treatment does not produce satisfactory results. While no very definite plan can be laid down for the management of individual cases, yet some rules can be formulated for our guidance in a general way. The so-called dry treatment would seem to be contra-indicated under the following circumstances:

- (1) When the discharge is so profuse that the powder becomes super-saturated with it before it has time to exert any beneficial influence. In such cases the remedy does not afford any of the advantages of the dry treatment, and may do harm instead of good. I have seen several cases where the dry treatment proved a failure in the hands of others, and this failure was due to the fact that the powder became thoroughly saturated within an hour or two after its application. Sometimes the abundance of discharge was due to one cause, and sometimes to another; but usually to the presence of large granulations or to polypus.

(2) When granulations or polypi exist, whether accompanied by excessive discharge or not, the dry treatment should not be employed until these bodies are destroyed or removed. Powdered boracic acid will, however, in some instances, cause the destruction of granulations and polypi, as will be seen in the report of cases.

(3) When the disease is complicated by necrosis of the temporal bone. In such cases it should be our aim to get rid of the dead bone, and to such end we should encourage nature in her efforts instead of impeding her.

(4) When mastoid abscess is present or is suspected. Here everything should be done to favor the outflow of pus, and any treatment of the tympanic cavity, except cleanliness, must be useless so long as we have a suppurative process in the mastoid cells. Of course such abscess should be at once evacuated by operative procedure.

(5) When there is any good reason to suspect the presence of meningeal or cerebral complication.

The remedies which may be used in dry form are numerous, although I have confined myself to the use of a few. Boracic acid I have found to meet the indications in the majority of cases. When absolutely free from impurities, such as sulphuric acid, etc., it is a valuable therapeutic agent. But, strange as it may appear, it seems difficult to get an absolutely pure preparation of boracic acid. Quite often the failure to cure a given case of chronic suppurative otitis media is attributed to the acid, when, in reality, the failure is due to some impurity in the powder which keeps up an irritation of the ear. I have had some very unpleasant experiences with impure preparations of this drug. In several instances where an impure article proved irritating and aggravated the disease, a sample free from impurities quickly effected a cure.

I have found the boracic acid manufactured by John Wyeth & Brother to give uniformly satisfactory results. Boracic acid and resorcin—seven parts of the former to one of the latter—also form a good combination of two very powerful antiseptic agents. The resorcin is too soluble to be used alone and therefore its union with some other agent is advisable. Bismuth subnitrate and perchloride of mercury—one or two grains of the latter to the ounce of the former—make a very valuable compound for certain cases. The bismuth is a great absorbent and the corrosive sublimate is not only a valuable disinfectant but a powerful germicide. When chronic suppurative inflammation of the tympanic cavity is complicated by a dermatitis, or ulceration of the auditory canal, or by eczema, the combination of bismuth with corrosive sublimate is especially valuable. The mercurial may be combined with boracic acid in the same proportion as with bismuth. Astringents, such as pulverized alum, etc., may be combined with boracic acid if desired. In

this way numerous compounds can be formed, but a few will answer every purpose. I have found as much advantage from the use of pure boracic acid as from the acid combined with other substances.

In common with many other aural surgeons, who employ powders in the treatment of chronic suppurative otitis media, I pay great attention to the thorough cleansing and drying of the tympanic cavity and external auditory canal, before using the powder. These may seem to be unimportant points, but if ever the adage, "What is worth doing at all is worth doing well," were fully illustrated, it is in regard to the importance of thoroughly cleansing and drying the ear before treatment. As a rule three agents are necessary to cleanse an ear—the syringe, the Politzer bag, and the cotton mop. In some cases, however, the use of a syringe may be dispensed with, but I do not think any harm comes from the proper use of the syringe as some writers would have us believe. After the ear has been cleansed a small quantity of the dry powder may be blown into the deeper portion of the canal, and even into the tympanic cavity itself, and then the canal may be loosely filled with the powder. If the surgeon has no powder blower, he can improvise one by using a quill. The powder may be allowed to remain in the ear one, two or more days, or until it gets moist. When it becomes moist it should be removed, the ear should be thoroughly cleansed and dried, and the powder should be used as before. Some surgeons carry the dry treatment to the extreme, and contend that we should not use water and syringe to remove the powder, but should use the petroleum oil and cotton mop. To me this seems an unnecessary precaution. I have always syringed out the powder, when I desired to remove it, and I have had some very brilliant cures made by this mode of treatment.

I shall now take the liberty of citing a few cases in which the therapeutic value of remedies in dry form is well illustrated.

Case I.—Four years ago I had under my care a member of the Detroit police force. He had had for many years a suppurative inflammation of the middle ear. The greatest care was taken in regard to cleansing the ear each day, with syringe, Politzer bag and cotton mop, after which an application of some astringent was made. Although the discharge greatly diminished, and although the opening in the membrana tympani grew much smaller, I could not effect a complete cure—at least within a reasonable time. The patient passed out from under my care and observation until six months ago, when he came to inquire if anything further could be done for his case. His ear had discharged constantly from the date of his previous visits, nearly three and a half years before. I decided to try the dry treatment which had been so frequently successful.

The ear was thoroughly cleansed and the canal loosely filled with powdered boracic acid. This operation was repeated three times thereafter, when not only was the discharge stopped, but the drum membrane was entirely healed, and the patient has remained well since.

Case II.—A child of William Gall was brought to me at the suggestion of the family physician (Dr. Inglis) for a suppurative otitis media of four or five weeks standing. The discharge was both profuse and offensive, and from the tympanic mucous membrane projected several large granulations. The ear was cleansed as thoroughly as possible, and the canal was partially filled with boracic acid powder. When the powder became moist it was removed, the ear was thoroughly cleansed and the powder was again applied. The discharge diminished rapidly, the foul odor disappeared, and after seven applications the ear was well and the integrity of the drum membrane was restored.

Case III.—Miss A., was referred to me by Dr. Longyear, of Detroit. She had had a suppurative otitis from childhood. She had been treated, but unsuccessfully. After cleansing the ear, a polypus was observed projecting from the drum, and it was removed by the snare. To the remains of the pedicle, a solution of chromic acid was applied. Next day, after thoroughly cleansing the ear with syringe, Politzer bag and cotton mop, the boracic acid was used as in the cases just related. Five applications of the powder were sufficient to completely check all discharge from the ear which had been suppurating for twelve years, and in which a polypus had developed.

Case IV.—Chas. W. was referred to me by Dr. Jas. D. Munson, for a long-standing suppurative inflammation of the middle ear. There were two polypi in the ear, only one of which was removed, owing to the dread of the operation on the part of the patient. The treatment consisted almost exclusively of dry applications, mainly boracic acid. The polypus soon disappeared, the discharge stopped, and in a few weeks the drum membrane was entirely healed. This patient had suffered much from vertigo previous to coming under my care. This was probably due to pressure made by the aural polypi, for with the cure of the disease all vertiginous symptoms disappeared.

Many other cases could be reported, but they would be to a certain extent, only a repetition of those just given, each of which differs in some respects from the other. In the first case the therapeutic value of boracic acid is shown in a simple uncomplicated, but persistent case of chronic suppuration of the tympanic cavity. The persistency of this case might have been due, in part at least, to the occupation of the patient which exposed him much to the night air in all kinds of weather. The second case illustrates how boracic acid corrects

the foul odor of a suppurating ear, and at the same time removes granulations of the tympanic mucous membrane. The third case is an example of the importance of removing remediable complications, and at the same time shows the value of boracic acid in the general treatment of the disease after the complications are removed. The fourth case illustrates how even polypi may disappear under the use of powders. It seems a little remarkable that it should occur, and although such occurrence is not rare, yet I must reiterate what was said regarding contra-indications, that these growths must be removed by operation.

In conclusion, I would say, that while the use of powders is not always advisable, they meet the indications in a majority of cases, and by their use our field of therapeutics has been greatly enlarged, and our ability to control and cure a disgusting and dangerous disease has been greatly augmented.

GENERAL CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

REPORTED FOR THE PHYSICIAN AND SURGEON.

The regular quarterly meeting of the Michigan State Board of Health was held in the office of the Board at Lansing, Michigan, July 8, 1884, the following members being present: John Avery, M. D., of Greenville, president; C. V. Tyler, M. D., of Bay City; Henry F. Lyster, M. D., of Detroit; J. H. Kellogg, M. D., of Battle Creek; Victor C. Vaughan, M. D., of Ann Arbor; Arthur Hazlewood, M. D., of Grand Rapids, and Henry B. Baker, M. D., secretary.

The Committee on Examination of Text-Book on Physiology and Hygiene with special reference to alcohol and other narcotics, reported, after which the following resolution was adopted:

Resolved, That while we cannot recommend, without qualification, any of the books presented to this board for examination, with the exception of those already acted upon, on account of numerous and important errors and omissions, the following works seem to us to be admissible for use in the schools, although we consider it important that the errors referred to should be eliminated as speedily as possible; and that without such correction none of the works named can receive the entire approval of this Board:

(1) "Physiology and Hygiene." By J. C. Hutchison, M. D., LL. D. New York: Clark & Maynard, publishers. Edition of 1884, with Supplement on Stimulants and Narcotics.

(2) "The Laws of Health: Physiology, Hygiene, Stimulants, Narcotics." By J. C. Hutchison, M. D., LL. D. New York: Clark & Maynard, publishers.

(3) "Hygienic Physiology, with Special Reference to the Use of Alcoholic Drinks and Narcotics." By J. D. Steele, Ph. D. A. S. Barnes & Co., publishers, New York and Chicago.

(4) "Lessons on the Human Body: An Elementary Treatise upon Physiology, Hygiene, and the Effects of Stimulants and Narcotics on the Human System." By Orestes M. Brands. Leach, Shewell & Sanborn, publishers, Boston and New York.

(5) "First Lessons in Physiology and Hygiene, with Special Reference to Alcohol, Tobacco, and Other Narcotics." By Chas. K. Mills, A. M., M. D., Philadelphia: Eldredge & Brother, publishers, 1884.

(6) "Elements of Physiology and Hygiene." By R. T. Brown, M. D. Van Antwerp, Bragg & Co., Cincinnati and New York.

(7) "The Eclectic Physiology for use in Schools." By Eli F. Brown, M. D. Van Antwerp, Bragg & Co., publishers, Cincinnati and New York.

The secretary presented a report on four outbreaks of cheese-poisoning in Michigan, during May and June, namely, at Middleville, Barry county, Jerome and Jonesville, Hillsdale county, and Big Rapids, Mecosta county. All persons who ate of the cheese were taken sick, (in all about one hundred and sixty-four persons) with the same symptoms, that is, pain and burning sensation in stomach, intense vomiting and purging, feeble pulse, cold extremities, and tendency to collapse. All finally recovered. The cheeses were ordinarily good looking samples, but when cut or broken a liquid oozed into the pores. In each case the cheese was made at the factory of G. B. Horton, Fruitridge, Lenawee county, Michigan.

Dr. V. C. Vaughan, Committee on Foods, also read a report on cheese-poisoning. At the request of the secretary he had visited the factory in Fruitridge, and had analyzed specimens of the cheese. Everything about the factory appeared to be scrupulously clean, and nothing in vats, cans, or surroundings offered any explanation of the cause of the poisoning. Analysis showed no arsenic, copper, lead, iron, or other mineral poison. When the cheese was cut or broken a whitish liquid oozed into the pores, and in this liquid microscopic organisms were detected. The liquid was very strongly acid. For more than one hundred years the attention of the scientific world has been drawn to the subject of cheese-poisoning by repeated outbreaks of this sort in this country and in Europe. Much has been written on the subject, and many investigations carried on, especially in Germany. It has been variously ascribed to diseased milk, decomposition and the development of certain fatty acids, etc., but we do not yet know what makes the

cheese poison. The manufacturer said the cheese which produced the ill-results was all made between April 26 and May 26, 1884. It was made in the same manner and with the same care as other lots which had given no cause for complaint. Good cheese is only very slightly acid, and slowly reddens blue litmus paper. The poisonous cheese was intensely acid, instantaneously reddening blue litmus, when the paper was applied to the freshly cut surface. This test for poisonous cheese appears to be practicable. The blue litmus paper could be applied by any grocer to each freshly-cut cheese. If the litmus paper is instantly turned red by the liquid which oozes into the pores the cheese is to be suspected as poisonous. Dr. Vaughan's report will be published in the next annual report of this Board.

The secretary reported that small-pox was brought into Rose Lake township, Osceola county, Michigan, June 9, 1884, by a German immigrant, who, with wife and three children, landed in New York, June 4, by steamer "Weser," "Weiser," or "Wiére." The immigrant says that on the passage over there were on that vessel three deaths from small-pox, and several cases that recovered. The immigrant was taken sick June 13, and was attended by Dr. Bettes, of Le Roy village, in the adjoining township of Le Roy, who could not know the true nature of the disease till the eruption took place, soon after which Dr. Bettes himself came down with the disease, and has since died. The health authorities of Le Roy village had neglected to appoint a health officer as the law requires, because they thought they would "save a health officer's salary by doing without one." Dr. W. J. Law was then appointed health officer, and he seems to have done very efficient work, as did also Mr. Bryan Monghan, health officer of Rose Lake township. The townships of Rose Lake and LeRoy united in the construction of two hospitals, which were built June 29. At last report there were ten cases in the hospital, five cases at Tustin, and one at Cadillac.

This outbreak is another illustration of how Michigan and the north-west suffers from the lack of a careful immigrant inspection service, such as was planned by the National Board of Health, and for a time carried on, but discontinued for want of an appropriation.

The chairman of the special committee appointed to examine the sanitary condition of Washtenaw and Jackson county jails read their reports which were ordered printed in the annual report of the Board for 1884.

Owing to the spread of Asiatic cholera into Europe, and the liability of its introduction into this country at any time, it was decided to issue a circular to local boards of health on the "Prevention and Restriction of Cholera."

The third edition of thirty thousand copies of the document

on the "Restriction and Prevention of Diphtheria," being nearly exhausted, it was decided to revise it and issue a fourth edition of not to exceed twenty-five thousand copies, for general gratuitous distribution in Michigan.

The work of the office in compiling reports of sickness, meteorology, and of proof-reading, correspondence, etc., has continued as heretofore.

A compilation of the Public Health Laws of Michigan has been printed and is nearly ready for distribution.

The document on "Restriction and Prevention of Scarlet Fever" has been revised, and twenty-thousand copies printed for gratuitous distribution. Proof on most of the annual report has been read, and it is now printed up to page 224.

A second demand for the return of name and addresses of health officers has been made on delinquent townships, cities, and villages. Addresses of about ten-hundred and fifty health officers have been received and recorded. As fast as addresses of health officers for 1884 are received, there are sent to each such officer enough copies of the revised circular on the work of health officers and local boards, to supply each member of the board with a copy. Documents on the "Restriction and Prevention of Contagious Diseases" are sent with this circular, and a blank for notification to this office of an outbreak of a dangerous communicable disease. During the quarter about one-hundred and twenty-six letters, and eight-thousand documents have been sent to local health officers, where contagious diseases have been reported present, the documents being for general distribution among the neighbors, who, it is believed, are more likely to read them carefully at such times.

The next regular meeting of this board will occur October 7, 1884, instead of the second Tuesday in October, which would be its regular time.

HENRY B. BAKER, Secretary.

CLINICAL LECTURES.

ABSTRACT OF CLINICAL REMARKS ON VARICOCELE.

BY PROFESSOR DONALD MACLEAN, M. D.,

Professor of Surgery and Clinical Surgery in the University of Michigan.

Varicocele is a very common affection from which all classes of society suffer. It is most frequent during the developing and active periods of life. It is not often met with in young boys who have not reached the age of puberty, and is more rare in the aged. It is a constant source of annoyance to all, and coming at that time of life, no matter what may be the occupation of the individual, when all his mental force and physical vigor are needed, it may be a grievous trouble.

It is true that some men may go about performing the duties of their respective avocations with this difficulty, and are seemingly not disturbed by any inconvenience; but in the great majority of cases it proves a source of almost constant languor and weakness. In not a few it has a very dispiriting effect, thus while they may not be incapacitated physically, they become dejected, discouraged, and are unfitted for the active duties of life and deprived of all its enjoyments. This disheartening influence in some cases becomes extremely marked, the mind of the individual being constantly concentrated upon his malady. Such is the case with the young man whom we have just examined. His whole attention is given to his scrotal trouble. From his own statements we learn that he has made it a business for two years to write and obtain all manner of "quack" mechanical devices advertised for the relief and cure of his disease, upon some of which he has made supposed improvements. This illustrates the degree to which the mind may become occupied and affected, which, you must remember, is not always in keeping with the amount of enlargement found in the diseased region. The temperament and irritability of the patient are prominent factors. When it is the result of spermatorrhœa, or of prostatic disease, induced by self-abuse, as we have reason to believe has been the exciting cause in this young man's case, the mind is already weakened, and the symptoms arising are only so many additional signs to brood upon and to strengthen his convictions regarding his supposed ruin.

Varicocele is merely a mass of varicose veins. The spermatic vein or veins in the normal condition are, at the lower portion of the cord, numerous, tortuous, and freely anastomosing. When these veins increase in size and tortuosity, with thickening of their coats, which then lose their elasticity, the condition which constitutes varicocele is formed. You may have noticed that in all the cases that have been shown you this winter, the disease is on the left side. The following reasons explain the greatly increased tendency of the disease on that side: (1) The greater length of the left spermatic vein; (2) The more relaxed condition of the cremaster muscle and other tissues on that side as shown by the lower position of the left testicle; (3) The termination of the affected vein at a right angle with the left renal; (4) The weight of the usually filled sigmoid flexure of the colon upon the vein; (5) The absence of a valve at the junction of the left spermatic and renal veins. These may be regarded as the *predisposing* causes.

The *exciting* cause usually effects both sides equally, and may be any condition which increases the quantity of blood going to the testicle, or interferes with the normal free return of the blood from the gland; as straining at stool, continual standing, heavy lifting, riding or walking, a feeble relaxed

condition of the skin and dartos composing the scrotum, and excessive or unnatural venereal indulgence. If a varicose condition of the veins has once been produced, a very slight cause will aggravate it, as well as perpetuate it.

The symptoms and signs are usually well marked, although it may exist in a mild form without being particularly manifest either from size or discomfort. When, however, a patient comes to you for relief, he complains of a feeling of weight in the scrotum, dull pain along the course of the cord, a dragging, aching pain extending through the groin to the back. Sometimes the tumor becomes truly painful. Upon examination of the scrotum the side affected will be seen to be enlarged, the swelling somewhat pear-shaped. When you clasp the enlarged side between the thumb and finger it will not be smooth and even, but the swelling feels knotty, and according to the degree of engorgement, it will be firm and knobby or soft and compressible. The sensation has been fitly compared to the feel of a bag of angle-worms. The swelling may give a slight impulse on coughing; it will slowly diminish in size when the patient remains in a recumbent position, but it will assume its original size when he rises upon his feet, hence it is smaller in the morning than it is in the evening. If the testicle does not become more or less atrophied, it will be soft and spongy. The veins and the scrotum are the parts which suffer the greatest pathological change. The veins elongate, become more tortuous, and lose their elasticity. The structure of the walls become changed. They are thickened by the formation of a low order of connective tissue; along with this the muscular coat undergoes fatty degeneration. The varicocele will increase in size just in proportion to the degree reached in these retrograde conditions. The changes in the scrotum are the results of its adapting itself to the constantly enlarging veins. The muscular fibres in the skin and dartos lose their tone, all the tissues are weakened, the scrotum lengthens, and sometimes becomes so thinned that the veins are plainly visible. It is now in a condition to readily yield to the increasing weight and pressure within, and becomes more and more relaxed, until there exists a great amount of loose redundant scrotum.

Varicocele is to be diagnosed from scrotal hernia and hydrocele. They have only one common feature, the enlarged scrotum. The corded angle-worm feel is strikingly different from the soft boggy uniform swelling of a hernia. It does not have the translucence nor the fluctuation of a hydrocele. While it is possible to make a mistake, the diagnosis must be regarded easy and simple.

The treatment of varicocele must of necessity depend upon circumstances. In individuals of mature age, and robust constitution, it may attain a moderate development and then pro-

gress very slowly, or not increase at all. In such cases operative measures are not required, and the *palliative* course of treatment will generally relieve the annoying effects and inconvenience of the disease. A properly fitting suspensory bag, to support the testicle and gently compress the distended and weakened vessel, will often suffice. Another method consists in snugly fitting a laced bandage around the swelling, constricting it above the testicle, then by means of tapes attached below, the testicle is swung up into the fold of the groin, and the tapes made fast to a belt around the waist. The gland and veins are now brought into an inverted position, which tends to drain them and retards the current of blood. Attempts have been made to empty and reduce the size of the veins by drawing the lower portion of the scrotum through a soft metallic ring, but serious sloughs have resulted from this procedure. Pads and trusses, if properly adjusted, may benefit some cases, but they generally do more harm than good. Various clamps, compresses, and other mechanical appliances have been devised, but the very fact that new ones are constantly being brought before the notice of the profession, is sufficient proof that as yet none are satisfactory. Of all measures for temporary relief, the best, in my opinion, is a good, nicely fitting suspensory bandage. It should be of rubber cloth, and should fit well, not too tight nor too loose. It will afford the proper support, and a gentle pressure on the swelling. Applications of cold at night and in the morning or flagellations with a wet towel, will sometimes cause the scrotum to contract and give some relief.

Before patients come to the surgeon for treatment, they have usually tried some of these palliative measures, and have become dissatisfied, and it is of little use to try a new one. They come for something that will give them permanent relief. To obtain this result, the obliteration of the veins has been the favorite means employed by the surgeon. That they have particularly directed their attention to this avenue, is evident from the great variety of complex and difficult operations that have been advocated by their respective authors. The anxiety manifested for the success of these complicated procedures, is evident, in that each surgeon claims that his is the only safe method, all others being attended with more or less danger. To me, all attempts at obliteration of the varicose veins by ligatures, applied through an incision, or subcutaneously, are dangerous; and I have observed, and it has been the experience of most surgeons, that the ligation of the veins of a varicocele, as well as varicose veins of the lower extremity, has not resulted in their destruction, that such operations have been partial or complete failures.

The operation which you have repeatedly seen me perform, ever since it was recommended and practiced by Sir Astley

Cooper as a palliative measure, has gradually become more and more used as the operation for the radical cure of varicocele. It is an operation that is not difficult to perform, and is not attended with any special risk or danger.

The only special instrument that is needed in the operation is the clamp. This you see consists of two symmetrical pieces. The curve is made to conform somewhat to the shape of the edge of the scrotum. The inner surface of each plate is evenly grooved to prevent the soft contracting tissues of the scrotum from slipping. In adjusting the clamp some care and judgment must be used so that enough of tissue will be removed, as well as to guard against the removal of too much. The danger here is just the opposite to that which is to be avoided in circumcision. The liability is, that not enough tissue will be cut away. Until you have some experience the clamp should be applied while the patient is standing up. With the patient in this position you can decide better how much of the scrotum you need to take away. The bowels should be freely evacuated before the operation, and the short crisp hairs cleanly shaven from the scrotum. The portion to be removed can be cut away with either a knife or by a pair of strong scissors. Before this is done silk sutures are to be drawn through close to the posterior edge of the clamp. The threads must be long, so that they can be drawn away, to enable strict search for bleeding vessels, which must be carefully ligatured. This is a very important precaution to take. The scrotum is not to be closed up as long as there is any free hæmorrhage. It is well to wait a few minutes to see that no vessels have escaped that may begin to bleed after the sutures are tied. The tissue is so loose that if a clot once forms in it, it is almost impossible to find the bleeding point. After convincing yourself that there will be no hæmorrhage, approximate the cut edges by means of the sutures already applied, which should be at least six or eight in number. A more accurate adaptation of the wound should now be made by means of numerous horse-hair sutures. A rubber ice-bag should be applied to the scrotum as soon as he is put to bed.

The after treatment consists in keeping the wound clean, which should be washed three or four times a day with a weak solution of carbolic acid and water. The ice-bag should be removed as soon as there is no longer any danger of hæmorrhage from small vessels which may have, by contracting, concealed themselves in the loose tissues.

In very large and aggravated cases, catgut ligatures may be applied to the veins. This can be done very easily before the wound is closed, but from the dangers which arise from subsequent inflammation, which is liable to occur, I advise that it be done only in specially aggravated cases.

In all my experience I have never had a failure or any bad

results follow this operation, and with the utmost confidence, I can say that of all methods this offers the best prospects for a radical cure, with the least, if any chance, of injury to the testicle, and risk to life.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CLINIC.

UNDER PROFESSOR DONALD MACLEAN, M. D.,
Professor of Surgery in the Department of Medicine and Surgery of the University of Michigan.

REPORTED BY FRANK M. GIER.

SEVERE CASE OF SCIATICA RELIEVED BY THE ADMINISTRATION OF ONE DROP OF CROTON OIL.

J. R., aged twenty-seven. Admitted to the hospital May 20, 1884.

History.—Patient came with a letter from his physician, which stated that repeated attacks of sciatic pains had destroyed the general health of the patient. These attacks have continued to harrass him for over a year. The first severe one was in the winter of 1882-3, which lasted two months. The patient states that while the pain was exceedingly severe during these attacks, he was at no time confined to the house. He has used various liniments which had been prescribed but received no benefit from them. The galvanic current was applied frequently but no permanent relief was afforded by its use. The pain would be quieted while it was being used but soon returned. During the summer his sufferings were not so severe, but at this time he was troubled with persistent constipation of the bowels. No severe attack followed the summer's improvement until January of 1884. The pain was not severe enough to prevent him attending to the duties of his profession, but greatly disturbed his sleep. Within the past ten days he has been quite bad. The pain is very much worse at night than during the day. He has been wearing a "magnetic belt," but has failed to see that it has done him any good. "Saint Jacob's oil" has been perseveringly used but it has not given the expected relief. His physician has given all the "best known medicines" without avail.

Present Condition.—The general health is reduced. Appetite and digestion fair. Bowels are badly constipated. Constant pain in hip and limb.

May 21: Examined by Professor Maclean. Diagnosis, sciatic-

ica. The patient had been sent by his physician to have the sciatic nerve stretched. After citing a case which had existed a much longer time, and the effects much more severe, in which complete cure was produced by administering a single drop of croton oil, the Professor thought it better to give the oil a trial in this case, and instructed that one drop of the oil should be given.

May 23: Patient appeared before the class. The croton oil had had its particular active effect. The pain had disappeared and he was improving in general health.

May 24: No return of the pain. Appetite good. Bowels keep open. Dismissed.

PECULIAR DISEASE OF THE THIGH: ABSCESS: ASPIRATION:
RELIEF AND RETURN OF SYMPTOMS.

Mrs. P. H., aged twenty-eight. Admitted to hospital May 20, 1884.

History.—The patient has had weakness and an indefinite trouble in her left leg, which has compelled her to favor it for years. About two years ago this limb above the knee began to uniformly enlarge. Any use of the leg was now painful. The knee became flexed from contraction of the muscles. Extension and counter-extension were applied but gave no relief to the deformity, and greatly increased the pain. Nine weeks ago a sharp pain of increased severity attacked the patient in the lumbar region of the spine. In three hours following this paroxysm of pain a swelling was noticed in the upper posterior portion of the thigh. The region was painted with iodine, and applications of hot water were made, but the swelling, which seemed to be of the character of an abscess, continued to enlarge up to the present time. She has had frequent attacks of inflammatory rheumatism, and has been treated for displacement of the womb.

Present Condition.—Is reduced in flesh. Appetite and digestion poor. Weak and anæmic. Pulse small and rapid. Continues to have some uterine trouble. Is subject to severe neuralgic pains, through neck and shoulders, and much heat and pain in hip-joint. The left foot cannot be made to touch the floor on account of the flexed condition of the knee-joint.

May 21: Examined by Professor Maclean who diagnosed the swelling to be a large abscess over origin of ham-string muscles.

May 28: Abscess aspirated and contents, nineteen and a half ounces of pus, drawn away.

May 30: Patient feels some easier since operation. Quinine and iron ordered.

June 5: No improvement. Abscess refilling slowly. Suffering severe pain.

June 10: Tonic treatment continued. No improvement. Left hospital and became out-patient.

June 18: Returned to hospital. Pus cavity becoming gradually filled. Patient does not improved and is instructed to return home. Prognosis very unfavorable. Trouble due to a lumbar abscess which will soon exhaust her. Nothing can be done but to ease her downward course, and to make her as comfortable as circumstances will permit.

REMOVAL OF RIGHT TONSIL FOR MALIGNANT DISEASE.

Mrs. William B., aged forty. Admitted to hospital October 1, 1883.

History.—Patient noticed about four months ago that her throat was slightly sore. The pain was constant and was not of the character that accompanies inflammation of the tonsils or mucous membrane of the pharynx. In a short time it began growing more severe. Her throat became swollen and the right tonsil much enlarged. When the tonsil became thus enlarged the pain somewhat abated, but did not entirely subside; some soreness and tenderness remained. The tonsil continued to enlarge; its growth became more rapid as it increased in size. The patient has received treatment from four physicians, but derived no benefit. Some internal remedies were given but the medication consisted principally of local applications.

Present condition.—The mucous membrane of the soft palate, walls of the fauces and pharynx inflamed and swollen. Tonsil very much enlarged. Deglutition and respiration embarrassed. Glands of neck enlarged but not painful.

Diagnosis.—Fungoid malignant disease of the right tonsil.

Treatment.—Excision of the tonsil and application of a strong solution of chloride of zinc made thoroughly to the base of the growth.

October 4: Throat continues much inflamed. Parts in region of excised tonsil swollen and tender. Lymphatic glands of right side of neck enlarged. Patient weak. A gargle, consisting of chloride of potassium and muriate tincture of iron, was ordered to be used frequently.

October 8: Patient has contracted a severe cold. She does not feel well; is weak and depressed. Throat continues painful but the swelling and inflammation much reduced. Some tenderness and enlargement of the cervical lymphatic glands remain, but they are diminished in size.

To correct constitutional symptoms and improve the tone and general health of the patient, the following prescription was given:

R. Potassii iodidi..... ʒvss.
Tincturæ cinchonæ comp..... ʒiv.
M. Sig. One teaspoonful three times daily before meals.

W

The patient being restless and anxious to get away, expressing constant desire to return home, she was dismissed, with instructions to return upon the first evidence of any tendency of the reappearance of the disease.

May 22, 1884: Up to this date no unfavorable report has been received.

FIVE CASES OF VARICOCELE CURED BY AMPUTATION OF
ALL REDUNDANCY OF SCROTUM.

Case I.—W. A. S., aged thirty-five. Admitted to hospital December 14, 1883.

History.—Two and a half years ago patient fell astride of a fence so as to strike and injure left testicle. Immediately after the injury the testicle swelled to two or three times its normal size and was very painful. After a few days these symptoms began to improve, and in six weeks the pain and swelling had disappeared. One year ago without any direct cause it became swollen again, and the pain at this time was very severe. It has remained enlarged, and has continued to be more or less painful, and becomes so severe at times as to compel the patient to stop work. These aggravated attacks last a few hours, but they are quite frequent, and the intervals of time between them are becoming shorter. Pain extends into the back, down the leg, and into the shoulder and arm. When the swelling is the greatest it is not more than double the normal size of the testicle. It is much worse during warm weather, and sitting at a warm fire increases the pain and swelling.

December 17, 1883: Examined before the class. Diagnosis, varicocele. Given an anæsthetic and lower portion of scrotum removed. Amount of chloroform, ten drachms. Ice-bag used. All sutures removed by sixth day.

January 2, 1884: Dismissed cured.

Case II.—A. O., aged twenty-three. Admitted to hospital January 10, 1884.

History.—Patient first noticed an abnormality of left testicle ten years ago. It gave him no trouble until three years ago. The disease is thought to have originated from an injury received from climbing a rope. For the last three years the testicle has been more or less painful and at times quite severe.

Cannot remain. Advised to return for an operation.

February 4, 1884: Patient returned. Chloroform administered and operation of removing lower part of scrotum was made. Amount of chloroform used, one ounce. Whole time, ten minutes.

Ice-bag applied immediately. The annexed temperature and pulse record, taken from the hospital records, is typical of all cases.

DATE.	TEMPERATURE.	PULSE	TIME.	TEMPERATURE.	PULSE.	REMARKS.
February 5, A. M.	.....	.....	P. M.	99	112	Ice-bag removed.
6, "	99	104	"	100½	104	Kept food on stomach first time since operation.
7, "	.....	.....	"	102	108	Silk sutures removed.
8, "	98½	88	"	102	92	Horse-hair removed.
9, "	98½	98	"	100	88	
10, "	98½	88	"	99	74	
11, "	98½	76	"	99	74	Removed last ligature.
12, "	.....	.....	"	99	80	
13, "	98½	78	"	99	78	Granulations looking very healthy.
14, "	98½	76	"	99	76	
15, "	.....	.....	"	98½	80	
16, "	.....	.....	"	98½	84	
17, "	.....	.....	"	98½	82	
18, "	.....	.....	"	98½	82	
19, "	.....	.....	"	.....	.....	Was discharged cured.

Case III.—A. M. B., aged twenty-one. Admitted to hospital January 29, 1884, for varicocele of left side.

History.—The disease was first noticed about two years ago. It has never been painful. The patient attributes the cause to self-abuse. He has worn many kinds of bags, compresses, and various other devices, but all failed to do any good.

Examined by Professor Maclean, who thought the trouble might be cured with proper treatment, without an operation. The patient being a monomaniac on the subject, who believes his only means of relief is through an operation, under these circumstances there is no doubt that the best and most satisfactory course is to operate. Anæsthetic was given and an operation performed. Amount of chloroform used, five drachms. Time of operation, ten minutes. Very little hæmorrhage. Ice-bag applied immediately after the operation.

February 2: Silk sutures removed. Patient feels well.

February 4: Improving very rapidly. Horse-hair sutures removed. Wound healing rapidly. Patient comfortable, and has been so all the time since the operation.

February 16: Wound healed. Dismissed cured.

Case IV.—J. E. B., aged twenty-four. Admitted to hospital April 22, 1884.

History.—Varicocele of left side, was first noticed about six years ago. The patient thinks it was caused by an injury.

April 23: Patient given an anæsthetic and usual operation performed. One bleeding point required the ligature. Ice-bag applied to scrotum immediately after operation.

April 25: Patient has had no bad symptoms. Silk sutures removed.

May 1: Horse-hair sutures removed. Wound healing rapidly.

May 15: The patient has been leaving the hospital and walking about freely for several days past. Wound nearly healed.

May 26: Wound completely healed. The scrotum contracted, and all evidence of varicocele vanished. Dismissed cured.

Case V.—W. M., aged twenty-nine. Admitted to hospital May 14, 1884.

History.—Lifted heavily one year and a half ago, after which the patient had pain in the lumbar region of the spine. About this time the bladder became irritable. There was a constant feeling of uneasiness in the region of the bladder, and a burning sensation in the bladder and along the urethra after voiding urine. Later there was a feeling of soreness and a tenderness when pressure was made over the bladder. These symptoms were worse after eating. The disturbance and irritability of bladder grew worse for a time, requiring him to pass urine several times during the night. After taking druretics, bromide of potassium, and salicylate of soda, these difficulties have become better, and in this respect the patient feels considerably improved.

Present Condition.—After standing for a time the patient complains of a dull pain in the lower portion of the spine, and a "dragging, hanging, sensation" along the groin. Rapid walking, lifting, or other active exercise increases these symptoms. The testicle drags down, and is tender on pressure. A severe aching pain is produced by lifting. When at rest, sitting or lying down, or walking easily, he has no pain or feeling of weakness.

May 21: Upon examination the professor diagnosed varicocele of left side. Chloroform was administered and the usual operation, cutting away the lower relaxed portion of the scrotum, was performed. But little hæmorrhage. No ligature required. Amount of anæsthetic, five drachms. Time of anæsthesia, fourteen minutes.

May 22: A slight fever, but in all other respects comfortable.

May 30: Sutures removed and wound healing nicely. Able to walk through the wards.

June 15: Dismissed cured.

EDITORIAL PERISCOPE.

THE ANTAGONISM OF DRUGS.

Dr. Walter G. Smith (*Dublin Journal of Medical Science*, January, 1884) begins by defining "antagonism" and distinguishing between it and "antidotism." An antidote is a substance, which, by chemical action, can deprive another substance of its properties, rendering it inert, or at least insoluble. An antagonist is a substance which produces effects opposed to those of another substance already absorbed. Antidotes act *chemically*, and neutralize the substance; antagonists act *dynamically*, and oppose the effects of the substance on the system.

Examples of antidote: sodium sulphate and acetate of lead—lead sulphate (insoluble).

Examples of antagonism: atropine and morphine, chloral and strychnia.

The author calls attention to the most famous views on the subject of antagonism, using the case of atropine and pilocarpine as an illustration, as follows: if atropine is injected into a cat, the salivary secretion is arrested at once; the secretion is restored by the injection of pilocarpine. Rossbach explained this on the hypothesis that the pilocarpine acted by stimulating to excessive action the few gland cells not paralyzed by the small dose of atropine. A more generally accepted view is that of Langley: that the cells are prevented from acting by the atropine, but act again so soon as pilocarpine enough is given to triumph over the atropine. This new theory he supports by continuing the experiment indefinitely, giving first a small dose of atropine to check secretion, restoring it then by a small dose of pilocarpine, checking it again with more atropine, restoring it again with more pilocarpine, and so on, many times in an hour, as long as the integrity of the tissues permits experiment. This seems to demonstrate that, when two medicines are given whose effects are directly opposed, the organ affected reacts to the medicine which is given in larger dose, and is affected to a degree corresponding with the excess of the large dose over the small one. To illustrate this, if five grains of one medicine exactly antagonize five grains of another, and if seven grains of the one, and five grains of the other are given simultaneously, the effect will be the same as if two grains of the former had been given alone. If five grains of each are given simultaneously, the effect is the same as if no medicine had been given. In such a case a true antagonism would exist between the two drugs, their actions summing themselves up algebraically like *plus* and *minus*. It must be admitted that even in the case of such antagonism it is easier to reduce an excessive stimulation down to the normal by a suitable antag-

onist than to accomplish the converse—that is, to level up a condition of extreme depression. For example, chloral hydrate is more likely to save life when a fatal dose of strychnine has been given, than strychnine is to save life after a fatal dose of chloral hydrate. It must also be admitted that the antagonism of drugs is best with limitations, the antagonism being sometimes true only for certain doses, or remaining true for certain organs longer than for others. For instance, one two-hundredth grain of atropine helps the action of one-sixth grain of morphine, but one-thirtieth grain of atropine counteracts the effect of one grain of morphine. The antagonism between atropine and morphine persists in the pupil long after doses have been reached in which both act as depressants of respiration. A further difficulty in the matter of antagonism is the fact that too large doses may affect the tissues of the body so that the organs may be paralyzed and the antagonism not demonstrated. For instance: if a very large dose of atropine is given, the salivary glands may be so thoroughly paralyzed that no quantity of pilocarpine will restore their function. At the same time enough atropine may be given to counteract three and a half times the fatal dose of physostigma (Fraser). The therapeutic importance of clearing up this matter is simply incalculable, and its significance cannot be overestimated.

SURGERY OF THE LUNGS.

The advance that is being made in the surgery of the viscera of the various cavities of the body, but more particularly of the lungs, is very encouraging. The following editorial review taken from the *Lancet* of March 8, 1884, contains very valuable information concerning the history, the opinions of various operators, and the results of several important cases:

“The domain of the surgeon is one that is ever widening, and it extends mostly in a direction of the organs contained within the three great cavities of the body. In the abdomen there is hardly an organ, except perhaps the pancreas and suprarenal capsule, that has not now been surgically dealt with. In the cranial cavity the revival of trephining and its application upon sounder principles is accompanied by successful intervention in cases of cerebral abscess. But as regards the thoracic cavity, although the serous sacs have long been freely dealt with, there is still open a way for bolder and more effective treatment of certain diseased conditions of the lung. That there are conditions of this organ which would justify surgical interference, provided that the interference be practicable, there can be no question; and the sole consideration is whether the risk entailed by the measures is to be considered as of moment compared with the relief from suffering, or the chance given of prolonging life. Under what circumstances, then, is surgical inter-

ference justified in lung disease? That is the real question which can best be answered by an appeal to what has already been done in this direction. The plainest and simplest measure is the incision of the lung to evacuate and drain cavities or abscesses.

"Drs. Powell and Lyell, in their paper referred to below, state that the procedure was advocated by Dr. Barry in 1743; and according to Krönlein (*vide infra*) the evacuation of pulmonary abscesses was urged by Gottlieb Richter, who died in 1811, his opinion being fortified by the fact that Benjamin Bell had successfully performed the operation. But the question was allowed to lapse, and for the most part surgery was contented to deal with empyemata, sometimes after a spontaneous pulmonary fistula had been formed, and to trust chiefly to the natural evacuation of the contents of an abscess through the air passages. But within the last decade much greater attention has been devoted to this subject, especially by Mosler in Germany, Pepper in America, and Powell, Lyell, Williams and others in England; and all that is wanted is a more precise code of indications for recourse to surgical procedure. It is indeed difficult to frame such a code, but there are certain things which should undoubtedly influence the determination.

"To deal with chronic cases first: It is doubtful whether it is necessary to tap the ordinary apical vomica of phthisis, which from their position are favorably seated for natural drainage; for even if the diagnosis of their limits were more precise than it mostly is, the artificial outlet might often come to be placed unfavorably for the object in view, which is, of course, to afford a free vent to purulent secretions, the constant passage of which over the bronchi, trachea, and larynx, is so liable to produce secondary ulceration. Still such tapping has been practiced, and with benefit; and cases especially suitable for it may occasionally arise. The operation is more justifiable in cases of basic excavation, whether as the result of chronic pneumonia or of bronchiectasis; where the difficulties of complete evacuation by the act of coughing are very great, and often unsurmountable; where accumulate^d secretion becomes putrescent, and where the risks to life from the setting up of secondary lobular inflammation and suppuration by "inhalation" are very real. It was on such a case as this that Drs. Douglas, Powell, Lyell reported in the sixty-third volume of the 'Medico-Chirurgical Transactions, 1880.' The patient was much relieved by the operation, the expectoration remarkably diminishing, and life prolonged for six weeks, when it was terminated by an attack of pneumonia in the opposite lung. In that paper there will be found, in addition to a historical summary, a fair statement of the reason for advocating incisions in the case of basic cavities, with the precautions to be observed in dealing with them. A somewhat similar case, complicated,

however, with empyema, was reported to the clinical society by Dr. C. T. Williams. In all such cases the chronicity of the disease militates against the hope of permanent good; but as a measure of relief, pulmonary paracentesis, under these circumstances, is not certainly justified.

"There is another class of cases in which the relief is more urgently demanded, and where the prospect, dark enough if the case be left alone, is made somewhat brighter by such intervention. It is the case of recent abscesses (we may exclude hydatids, whether suppurating or not; our Australian brethren have amply demonstrated the boldness with which these may be dealt), and especially those of gangrenous origin. Unquestionably now and again such cases recover under careful restorative treatment; but the very nature of the disease, and the risks of secondary inflammation, from the highly putrescent character of the sloughing tissue, limit the chances of recovery to a very few. When the diagnosis is assured it does seem to us that surgical interference is not only justified, but imperative, in spite of the slender hopes of success. Dr. Cayley's case at the clinical society in 1879, and Mr. Solomon Smith's case recorded in these columns (*Lancet*, January 17, 1880) were examples of this class; and although in neither did recovery ensue, yet the remaining days of life were rendered more tolerable, since the foul contents of the cavity were no longer evacuated at intervals by the wearing process of coughing. The subjects of pulmonary gangrene being usually those whose vitality is lowered from other conditions, much cannot be hoped from the surgeon's aid beyond this temporary benefit; still, the patient is placed in a condition more conducive to recovery.

"It was hardly to be expected that modern surgery would stop here. Incision for the evacuation of morbid fluids and secretions is one thing; excision for the removal of diseased products is another and bolder step. That step also has been taken, and in two instances with a rashness which it is difficult to justify—where the greater portion of a phthisical lung was extirpated, one patient dying a few hours after the operation, the other surviving nine days, when disease was also found in the opposite lung. We are unable to give the precise reference to these cases, which are merely mentioned by Dr. Krönlein of Zurich, in a paper in the *Berliner Kliniker Wochenschrift* of March 3, upon this subject. He rightly judges that surgery goes too far in extending her operations to the phthisical lung; but he shows in the case upon which he did resect a portion of lung what is possible in another form of disease. The case was one of sarcomatous tumor of the rib in a young woman. The growth sprang from the sixth rib on the left side, and was about the size of a child's head, and on June 26, 1883, he removed the tumor, which was periosteal, and afterwards resected a portion (nine centimetres) of the rib. The wound

was dressed antiseptically, and healed by first intention. On December 10, the patient again presented herself with a local recurrence of three weeks duration, but otherwise in good health. This recurrent growth was removed on December 14, and was found on reflecting the skin, to occupy the gap between the fifth and seventh ribs, to involve the pleura, and to be adherent to the lower lobe of the lung. In tearing down these adhesions the whole lung collapsed, exposing to view the pericardium and diaphragm. Owing to the dyspnoea which naturally ensued, the chloroform was abandoned. Krönlein then observed that there was a secondary nodule, the size of a walnut, projecting from the lung itself. He accordingly brought the organ up to the level of the wound, cut out the nodule with scissors, and arrested the hæmorrhage, which was but scanty, by a catgut ligature around the margins of the wound. The pleural cavity was washed out with salicylic solution, the outer wound closed by sutures, a drainage tube inserted, and iodoform gauze and salicylic bandage applied. At the end of three weeks and on the fourth dressing, cicatrization was complete. He was astonished at the small amount of exudation from the pleura, and the rapidity with which the lung unfolded and the signs of pneumo-thorax disappeared. The temperature only reached 38.2° centigrade (100.7° Fahrenheit) on two evenings, being at other times normal. The pulse and respiration rose to 140 and 60 respectively, after the operation, but fell to normal in a fortnight, and on her discharge from the hospital physical examination showed normal, but weak breath-sound over the lung, and impaired resonance at the seat of operation, which was slightly retracted with inspiration."

We quote this case in detail because it indicates a line along which surgery may perhaps advance, for it shows that tumors of the ribs may be excised, and even pulmonary growths also, with impunity. Whether Dr. Kronlein has succeeded in removing the whole disease is another matter. It is more than likely that he has not, but there can be little doubt that by his boldness he has prolonged life. Cases such as this are probably the only ones in which resection of the lung is justifiable; yet, in spite of this success, we doubt if surgeons in general will care to extend their operations upon this organ beyond the limits afforded by incision of suppurating cavities.

PUERPERAL SEPTICÆMIA.

Regarding the nature of puerperal septicæmia, there is at present, as has been in the past, a great amount of dispute. Through the advance that has of late been made in our knowledge of the use of antiseptics, it has ceased to be the dreadful scourge it once was, but as long as physicians continue to lose

cases from this disease, its origin and the best method of preventing and treating it will continue to be a source of debate and investigation. At present its origin is attributed to different causes. By some its source is held to be in such diseases as erysipelas, scarlatina and other specific diseases. Others claim it to be due to absorption of decomposing animal matter conveyed by the nurse or physician from without to the lacerated tissues, or by the retention within the uterus of fragments of placenta, membrane or clots. In regard to scarlatina being the frequent cause of the disease Dr. Atkinson gives the following facts and views in the *Practitioner* for March, 1884:

(1) Cases have over and over again been reported where the parturient woman has been the subject of scarlatina, and the peculiar symptoms of puerperal septicæmia have been entirely absent, and also where there have been cases of scarlatina, not only in the same house, but in the same room, and even in the same bed with the parturient woman, without the occurrence of any ill-effects.

(2) I have been credibly informed by a medical man that he was once called away from a case of scarlatina he was watching to attend two cases of midwifery, and that neither of the lying-in women had any unfavorable symptoms afterwards.

(3) I have also been told, and my informant is willing to swear to the fact, that one medical man attended three cases of confinement when his hands were freely peeling from scarlatina, and that not one of these cases had anything the matter subsequent to their confinement. In spite of these facts, I believe that serious harm might result were pus from the ulcerating surface of the tonsils to come in contact with an abraded surface of the uterus or vagina.

In the treatment of this, as well as all other kinds of pyrexia, it is important to inquire first of all as to the cause of the increased body-heat. In ordinary cold, bronchitis, pneumonia, etc., the prime cause is diminished heat-loss owing to suppression of perspiration, and as soon as the skin begins to resume its function, recovery at once begins to take place, but in septicæmia the cause of the increased body-heat is increased chemical action, owing to the presence in the blood of a greater or less number of disease germs, and the treatment has to be directed towards checking their growth and life. If this is successful, the cutaneous capillaries begin to dilate, and the temperature gradually to fall. In some cases the skin perspires profusely and yet the body-heat remains persistently high, but this results from vasomotor paralysis and is a symptom of very grave import.

The medicines we have at command for checking the life of disease germs are quinine, resorcin, kairine, salicine, carbolic acid, boracic acid, ether, etc. In the treatment of puerperal

septicæmia, quinine is particularly useful, inasmuch as it is not only a strong germicide, but also produces a contractile effect on the uterus and prevents fresh absorption. It is a good plan to administer from two to three grains of quinine with five minims of the tincture of digitalis, and from three to five grains of resorcin alternately, every two hours. If necessary to bring down the the temperature rapidly, an ice-bag may be applied to the head and one to the spine, while the body may be sponged with vinegar and water.

The uterus should be well syringed out with a solution of permanganate of potash (a drachm of Condry's to the pint of water) three or four times daily, while the temperature remains high. Plenty of good liquid nourishment should be given, and brandy administered according to the severity of the disease. By the adoption of these means most cases may be led on to a favorable termination.

LOCALIZED SWEATING IN LOCOMOTOR ATAXY.

Many phenomena pointing to an affection of the sympathetic nervous system in locomotor ataxy have been recorded. Amongst them are: the altered conditions of the pupils, the gastric, intestinal and vesical crisis, the permanent acceleration of the pulse which has sometimes been observed, the alterations in the secretions of the alimentary canal, the cutaneous ecchymosis and eruptions, and, according to some, the affections of the nails and joints.

To these we must now add alterations in the functions of the sweat glands.

In the *Revue de Médecine* for May, MM. Raymond and Art- and describe the case of a man, aged forty-six, who was the subject of ataxy, and who presented a well-marked sweating confined to the right side of the face after each meal. This came on in from ten minutes to a quarter of an hour after each meal, and was not associated with any change in the pupil; the sweating occupied the corresponding side of the head and neck, extending to the shoulder. There was no affection of smell or taste, but the patient said that there was increased flow of saliva on the affected side during the sweating. The injection of pilocarpine did not seem to cause more sweating on one side of the face than the other.

The authors mention that they have already recorded two cases in which the sympathetic ganglia were found to be affected at the *postmortem*, and they allude to Purret's view that the central origin of the sympathetic lies in the posterior vesicular columns and tractus intermedio-lateralis of Clarke, a region which is very commonly found to be sclerosed in cases of locomotor ataxy.

CONDENSATIONS.

THE valerianate of cerium, in ten centigramme doses three times a day, is recommended in the vomiting of pregnancy.

A CREMATORY for New York, at least so reported, is to be built at East Williamsburg, a company having bought land there for the purpose.

THE American Neurological Association at its late meeting elected Dr. Burt Green Wilder, of Cornell University, president for the ensuing year. "A graceful tribute to a distinguished worker in the field of physiological anatomy."

DR. EMMERICH, of Munich, believes that he has discovered the cause of an epidemic of inflammation of the lungs, during which one hundred and sixty-one persons were attacked, by finding the peculiar micro-organism of the disease in the plaster of the walls and ceiling of the inflicted houses.

It is claimed (Curci) that quinine has a tendency to produce anæmia of the brain. This investigator thinks it is not contra-indicated in cerebral hyperæmia, but that it checks the effect of morphia in producing hyperæmia. Its good effect in sunstroke is probably due to this property.

A TEST CASE.—Pasteur has recently been furnished with an opportunity of testing his theories relative to the prophylaxis of rabies upon a human subject. A French railway employe, having been bitten by a dog undoubtedly rabid, has placed himself in the hands of this eminent investigator.

At a recent meeting of the Philadelphia profession, resolutions were adopted, calling upon all interested in medicine and science to make contributions to the endowment fund for a memorial professorship of pathological anatomy. The *Medical News* announces that contributions may be sent to Dr. J. J. Duglison, lock-box 1274, Philadelphia.

In a paper read before the American Neurological Association, Dr. Bartholow expressed his belief that the continuous use of gold or sodium chloride, had, as a primary action, the power to promote destructive metamorphosis, to improve the condition of the blood, and to increase tissue strength. When used for a long time tissue changes become more rapid, the waste being in excess of repair. Connective tissue and pathological formations yielded most readily. When used early and persistently in locomotor ataxy it seemed to arrest the disease in favorable cases. In three cases he thought it not only

arrested the disease but that the patients had improved. The usual dose was about one-twentieth of a grain. In his experience no gastric or intestinal disturbance had followed the use of either remedy.

PROFESSOR HEGAR read a paper at Freiberg in which he supports the theory that the spinal cord can be stretched *in situ*. He has found that the cord is stretched when the spinal column is strongly bent. Traction is made upon the cord through the great sciatic nerves by flexing the leg upon the body with the knees and ankle-joints extended; and pressing the foot down to the face while the patient is on his back, overbends the spine and stretches the lower end of the cord. Dr. Hager recommends this treatment in those cases where women suffer from pain in the lower lumbar and sacral regions, and from nervous trouble referred to the region supplied by the branches of the lumbar and sacral plexuses. He has applied the treatment in a few cases, and it is stated in the paper, with success.

Now is the season that physicians experience the greatest difficulty in keeping up the vital powers of patients suffering from acute exhausting diseases. How to support the patient and bridge over the crisis of a disease, is always an anxious question to the physician, and more particularly is this true for the extreme depressing disorders of summer. The nourishment given must be highly nutritious and digestible. The stomach and bowels must have the least possible labor to perform, and the system must receive the greatest possible support. The nitrogenous substances must be employed to accomplish these ends; and for this purpose the beef peptonoids have been prepared. These preparations have a pleasant odor and flavor. They can be kept any length of time and are easily prepared for use. The albuminoids contained in the preparation are easily and perfectly digested in the stomach. It is to the great quantity of these digestive albuminoids present, that the beef peptonoids constitute so valuable a nitrogenous food in these cases.

It is not a feeling of curiosity that prompts the inquiry and investigation, either actual or hypothetical, concerning the cause and manner of the death of an eminent man. The individual, mental, and physical characteristics are more plainly marked in the lives of prominent persons. It is in these cases that the effect of physical disorders and disease upon the mind, and the influence of mental and other nervous disturbances upon the various functions of the physical economy, are most evident. Usually, more minute and careful record is made of the illness and death of men of note, which

furnish concise details, upon which accurate scientific conclusions can be deduced.

It is a question what caused the death of the poet Burns. The following comments and the conclusion made in the *Lancet* upon the peculiar life and early death of this remarkable man, can be read with interest and profit.

"In those days no accurate life histories were written, or possibly even thought of. The data for diagnosis of the poet's last malady or of his constitutional type consist, therefore, merely of the statements, somewhat colored, of his friends, respecting his symptoms or the opinions of his medical advisers. Nevertheless, there is enough to justify the bringing forward a suggestion on a subject which is not without interest in connection with the later advances of medical knowledge. Two points are prominent in the physical state of Robert Burns, as far as it has been recorded, and these are evident throughout his life—great development of muscular strength, and a sympathetic excitability of unusual acuteness. Proofs of this latter state appeared as early as the age of thirteen in a tendency to melancholy, associated with dull headache. Before thirty was reached, palpitation with threatened attacks of syncope, showed itself after a period of celebrity and luxurious dissipation in Edinburgh. At thirty-five we find him complaining to a friend that he 'suffers from the follies of youth,' and that 'flying gout' has attacked him; also that he has been siezed with an 'accidental complaint,' but he still appears to have passed for a vigorous man. Here we trace the entrance of another element or elements of disease unobserved until then. A year later, after a deep potation, he was chilled, suffered from fever with rheumatism joint symptoms, followed by emaciation, muscular tremors, and death in seven months. In this recital, then, we find first a strongly neurotic basis for the action of disease, a nervous system very active, overwrought, and, we may suppose, at times overnourished within the verge of morbid congestion. Serious disease need not have followed from this alone in a constitution so elastic; but on a system, so tried, is cast the burden of continued dissipation, and subsequently that of actual acute disease. It is remarkable that it should have proved unequal to the triple strain? All are aware how badly the neurotic type resists the effects of convivial indulgence. The professional mind will recognize, moreover, the readiness with which structures overtaxed by exercise become the selected seats of inflammation. We cannot forget these facts in estimating the meaning of 'flying gout' and 'rheumatism' as applied to the illness of Burns. While, therefore, it is impossible to gauge the causal influence of gout, rheumatism, or 'the follies of youth,' the final and only grave illness of the poet presents to our mind a history and features further indicative of inflammatory mischief in the spinal cord."

NEW PUBLICATIONS.

YEAR-BOOK OF MEDICAL PROGRESS. A Year-Book of Surgery for 1883. Edited by Charles H. Knight, M. D. Price, \$1.50. New York: G. P. Putnam's Sons, 1884.

The work of compilation has become a special acre for toil in the field of medical literature. Journals, writers and investigators are too numerous for the average physician to get much of the knowledge of the current literature which they annually produce, unless some one takes hold to sort, arrange, tabulate and condense it all for him. This little work aims to furnish such aid and assistance upon the more important contributions to surgery. The author has carefully gleaned the leading periodicals and has selected and abstracted that which is surgical in the published thoughts of 1883, and arranged it in five parts. (1) General surgery and surgery of the extremities; (2) Surgery of the head and neck; (3) Surgery of the chest and abdomen; (4) Surgery of the genito-urinary organs; (5) Venereal diseases.

While the journals of all countries have been "creamed," the material collected has been reconstructed with valuable comments. In the efforts to lessen the labor of the practitioner by placing in his hand, in a neat and attractive book, the widely scattered records of the past year's observations, its work in new inventions, its results of improved and original operations, that have been made in that time, the author has been eminently successful.

YEAR-BOOK OF MEDICAL PROGRESS. A Year-Book of Therapeutics for 1883. Edited by Royal W. Amidon, M. D. Octavo; price \$1.50. New York: G. P. Putnam's Sons.

This work is uniform with the "Year-Book of Surgery." These are works of a series, which are published to present in a clear manner and compact form the advances that have been made in the different departments of the medical science for the year 1883. They must necessarily contain that which is newest, consequently the periodical portion of medical literature is the chief base for supplies.

The new remedies treated in this work are arranged alphabetically. All things new in therapeutics that have been published, receive editorial commentation in the "Introduction" or "General Review." The author correctly concludes that there has not been the stability in therapeutical advance that would be expected when we consider the many new medicines that are being constantly prepared.

This work with its companion cannot receive other than a glad welcome from the profession. They are reviews of the year's work, and without such aid to freshen the memory, many

contributions would be forgotten, or the journal in which they were originally published being mislaid or destroyed, the source of much useful knowledge is lost, which might be of great future profit.

THE AMERICAN JOURNAL OF OPHTHALMOLOGY. Volume I, Number II, May 15, 1884. Edited by Adolf Alt, M. D., Saint Louis, Missouri. J. H. Chambers & Co. Terms, \$2.50 per year.

This new journal makes its claim for professional favor from the unobjectional reason that it is needed, and it has a right to special distinction, being the only American journal solely devoted to ophthalmology. In it a medium is afforded for publishing the results of ophthalmological research and clinical experiences, and for recording the progress made by American workers in this specialty.

On its title page appears the names of nineteen collaborators, who represent the principal medical centres and cities of the United States and Canada. With such assistance, and the promise of the support of other leading specialists, the success of the journal is secured. This number is made up chiefly of original articles which are instructive and practical.

THE ANNALS OF HYGIENE. Volume I, Number I, July 15, 1884. Edited by Joseph F. Edwards, M. D. Price, \$1.00.

This new creation comes clothed in green and gold. It will devote its life to the "fostering of preventive science and the preservation of health." Queries from any one interested in sanitary science, will please the editor, and will receive prompt attention. May its intended useful life be long and successful.

BOOKS AND PAMPHLETS RECEIVED.

MENTHOL: A brief Review of its Origin, History and Medicinal Uses. Detroit: Parke, Davis & Co.

URINARY TEST PAPERS—INSTRUCTIONS FOR THE USE OF. Detroit and New York: Parke, Davis & Co.

PROVINCIAL BOARD OF HEALTH OF ONTARIO. Second Annual Report, being for the year 1883. Toronto: C. Blackett Robinson.

POISONING BY CANNED GOODS. By John G. Johnson, M. D. Reprint from the *Medico-Legal Journal*, New York: Vanden, Houten & Co.

TENNESSEE STATE BOARD OF HEALTH. Report of the Proceedings of the Quarterly Meeting. Nashville, July 1, 1884. Hasslock & Ambrose.

MEMOIR ON THE NATURE OF DIPHTHERIA. By Drs. H. C. Wood and H. F. Formad. Philadelphia. Appendix: A Report of the National Board of Health for 1882.

CORTICAL LEIONS OF THE BRAIN: A Collection and Analyses of the American Cases of Localized Cerebral Disease. By M. Allen Starr, A. M., M. D., Late House Physician to Bellevue Hospital; Attending Physician New York Dispensary; Assistant in New York Polyclinic, Department of Nervous Diseases. Reprint from the *American Journal of the Medical Sciences*.

MEDICAL DIGEST.

REMOVAL OF FOREIGN BODIES FROM THE EAR.

The following useful observations were made by Dr. Sexton in a clinical lecture at the New York Eye and Ear Infirmary:

He called attention to the fact that foreign bodies are not often met with in the ears of very young infants, unless put in by playmates—a difficult feat, on account of the collapsed state of the canal in these subjects. Older children frequently introduce them themselves. The entrance to the meatus is often, especially in children, naturally contracted by the elastic fold of its posterior border, which comprises that portion of the cartilage forming the bottom of the concha and beginning of the canal. When foreign bodies are slipped beyond this constriction, they are indefinitely retained, since they cannot fall out again of themselves, nor can they be removed by jarring the patient's head. In syringing for their removal, escape at this point is difficult, and should, therefore, be facilitated by drawing back the auricle and completing the extraction by means of the hook or forceps. Illumination by means of the head-mirror is a *sine quâ non*. There should never be undue haste or precipitation in the efforts at removal. In young and restless children it is quite often necessary to administer an anæsthetic before beginning operative procedures. The operator should first carefully ascertain the exact location of the object, and its size and character; and as to this matter, the statement of the patient or friends, should not be implicitly relied on, as they are frequently misleading. Regarding the choice of instruments, Dr. Sexton advised that when the patient was old enough to keep quiet, and the object was found just within the lumen, the hooked curette was usually alone sufficient; but even in such a case as this, if the body had been started further in on being touched, it was well to direct a small stream of warm water into the canal, well to one side of the stranger, if possible; and this should be quickly followed up until successful—not forgetting that the child must be firmly held by a competent assistant. Should the body, however, be found well down in the *cul de sac* and impacted, as is too often the case from previous unsuccessful efforts, syringing may be unavailing, and the foreign-body forceps will often be needed—indeed they are of the greatest value when the object is impacted anywhere in the canal, since when held in their bite very great traction can be made. When the hard, or smooth and hard, nature of the object prevents a secure hold being thus obtained, the hooked curette is the most serviceable instrument; for it can be, in nearly all cases, forced between the object and the walls of the canal and from its firm hold—the

teeth being set so that, on withdrawal, they become fastened, or firmly impinge against the object—effective traction can be made.

Of course, when a firmly impacted body has once been started, efforts should not be relinquished until successful, even though the canal be considerably lacerated, for such wounds are generally found to heal very promptly. When the body lies in contact with the drum-head, it requires great tact and dexterity to avoid injury to that delicate structure; but in the great majority of instances the operation may be safely performed. In these difficult cases of deep impaction, it is often found that the foreign-body forceps will grasp hard and smooth objects more successfully than would be supposed, and patient effort in this direction should not be too quickly relinquished. The surgeon must under no circumstances try to fix the forceps without distinctly seeing what he is about. If the parts are moistened with blood, mucus, etc., this should be carefully wiped away before proceeding. Sometimes the bleeding may be checked by light syringing with hot water before wiping the parts. Should the operator carelessly poke the forceps about in the neighborhood of the drum-head in efforts at seizure, he may easily lacerate the membrane.

EARLY EXPLORATORY TREPHINING IN DEPRESSED FRACTURES.

In using the word trephining I apply it to all methods of removing portions of the cranial wall, whether by the trephine, saw, burr of the surgical engine, gouge or cutting forceps.

From observation, experience and considerable acquaintance with the literature of the subject, I am convinced that surgeons are induced to decline or postpone the operation of trephining because of a mistaken idea of its serious nature, and a misunderstanding of the reason for its adoption.

The frequency with which successful trephining was done in past centuries without the benefit of our improved methods and instruments, and the frequency of death or serious symptoms from the operation itself at the present day, convince me that, though a capital operation, it is not one having in it many elements of danger.

That many deaths occur after trephining is admitted. Such fatal results must often occur, for injury to the skull bones is usually and almost necessarily coincident with disturbance or actual lesion of the brain or its membranes, I believe that more deaths are attributed to non-performance of trephining than to its adoption. It behooves those who greatly limit the application of the operation to prove, by citation of cases, that a fatal issue has been induced by the procedure itself in a suffi-

cient number of instances to throw the operation into the class called dangerous. To merely show that many cases of serious skull injury recover without trephining is not sufficient.

Much controversy on this subject would be avoided if the advocates and the opponents of an extended use of trephining would clearly formulate their opinions as to the theory upon which the operation is performed. In my opinion, trephining should be regarded in the light of an exploratory rather than a therapeutic procedure.

I incise the scalp, in closed fractures of the skull, not because the incision cures, but because it tells me the condition of the bone, without which knowledge I am unable to treat the patient rationally. The uncertainty of the lesion is, in my opinion, more dangerous to health and life than the conversion of a closed into an open fracture of the skull, because the observation of the profession teaches that open cranial fractures do not resemble in fatality, similar open fractures of long bones. In truth, I would be willing to make a closed fracture of the thigh or leg an open one, if it was otherwise impossible to replace fragments which were threatening life. If I but learn the character of the skull lesion, I am acquainted with surgical expedients that render restoration to health more probable than the complication due to the incision renders it improbable; hence, I am justified, nay, compelled, by my reason, to advocate exploratory incision of the scalp in obscure injuries of the skull.

The same line of reasoning forces upon me the conclusion that I should trephine whenever the fracture, whether originally an open one or so made by my incision, presents the possibility of the inner table being detached and splintered more extensively than the outer. In other words, I should cut the scalp to see the condition of the outer table; I should cut the bone to see the condition of the inner table, in every case where the risk of obscure knowledge is greater than the risk of divided scalp and perforated bone.

Many experimental fractures made in the dissecting-room, and observation of cases in the practice of myself and of others, teach me that extensive shattering of the inner table, with only a moderate amount of fracturing of the external table, is of frequent occurrence in other as well as in punctured fractures.

I admit that the condition in the dead subject, with its shrunken brain, is different from that in the living; but there is much evidence of the same splintering to be found in the study of accidental and homicidal skull fractures. Punctural fractures have long been treated by early trephining to avert encephalitis. For the same reason I recommend resort to trephining in more diffused and less accentuated fractures. It is to prevent inflammatory sequences due to splinters forced into the membranes and brain, and to avert the consecutive occur-

rence of epilepsy and insanity, that the operation should be performed; not because of the fear that symptoms of compression of the brain may arise, nor because necrosis of detached portions of bone may occur. I am not a believer in the pathology that teaches that the symptoms which we call "compression of the brain" are due to displacing pressure exerted on the brain substance. How can a slight or even a considerable depression of a limited area of bone produce much pressure upon the brain substance? How can the usually limited extravasation of blood under the seat of fracture fatally compress the brain, which is of firmer consistence than the blood itself? A rapidly acting heart, after violent exercise, will throw enough additional blood into the cerebral vessels to produce more intra-cranial pressure than the ordinary depressed fracture. The complexus of symptoms called compression of the brain may possibly be the result of a disturbance in the local capillary circulation of the membranes and subjacent nervous tissue; but I cannot believe it to be due to compression or displacement of the brain itself. It is more probable that compression symptoms are the results of encephalitis, due to injury from spicules of the inner table, or to the irritation of intra-cranial bleeding.

As soon as the profession repudiates the idea that brain displacement is what causes compression symptoms, so soon will every surgeon be convinced that early trephining is a proper exploratory procedure in order to determine what measures are demanded to avert encephalic inflammation. "Compression of the brain," as seen after injury, should be translated "inflammation of the brain," and looked upon as probably due to unrelieved irritation of the brain periphery, from traumatic causes. Not until this is so understood will the discussion as to the utility of trephining in depressed fractures cease. I repeat, then, that trephining is not a therapeutic, but an exploratory operation; and, as such, is demanded with much greater frequency than is usually supposed. If it is to be employed for exploratory and diagnostic purposes, early resort thereto needs no defence. When about to use the trephine itself for perforating the skull, to allow elevation and extraction of fragments, the surgeon should select a small conical instrument; one not over three-eighths of an inch in outside diameter at the cutting end, is large enough. Those usually kept by the instrument makers are too large. It is only necessary to bore an opening sufficiently large to admit the end of the elevator, hence a small trephine is always more proper than a large one, except in those comparatively rare cases where a large disk is to be removed over the line of an old depressed fracture.

Recently, I visited the four principal instrument makers of Philadelphia, and could not find in stock any trephine as small as that which I recommend. The belief which has

caused trephines to be made so large is founded on an erroneous theory.

In recent depressed fractures the trephine crown should be applied upon the solid bone, and should overlap the least depressed edge of the displaced fragment. This allows more ready elevation or extraction by means of the elevator, because the most depressed edge is very frequently beveled, with the inner table broken at a more distant spot, and is thereby wedged under the solid portion of the skull at that side. Elevation at the least depressed edge is effected more readily and with less danger to the brain from the manipulation.

To conclude, I assert that in all subcutaneous injuries of the head with possible existence of depressed fracture, an immediate exploratory incision should be made in the scalp. In all instances of depressed fracture with possible existence of splintering and spiculation of the inner table, an immediate exploratory trephining of the skull should be done.—J. B. Roberts, M. D., in the *Polyclinic*.

INTESTINAL OBSTRUCTION CAUSED BY A DIVERTICULUM
SUCCESSFULLY TREATED BY OPERATION.

The following is an abstract of a paper by Mr. Clutton, read at the Clinical Society of London, May 9, 1884: The patient, a boy, aged ten, had had several similar attacks before he was brought to Mr. Clutton. These attacks lasted only two or three days, and always terminated with a copious evacuation from the bowels after enemata. On this occasion he was taken suddenly ill with vomiting and great pain in abdomen. Treatment by enemata and opium proved of no avail. On the fourth day Mr. Clutton was consulted on the probability of an operation affording relief. He was at once transferred to Saint Thomas' Home, where, after the administration of an anæsthetic, the abdomen was opened. A collapsed portion of bowel was soon found, and on bringing it to the surface a tight ring-like cord could be felt and seen to be the cause of strangulation. This band was clamped by two pairs of forceps and divided, each end was then ligatured with catgut and forceps removed. The bowel was found, after the division of the constricting band to have been set free from strangulation. It was not thought desirable to make more than a cursory examination for the origin of the band causing the obstruction as the boy was much collapsed before the operation commenced. The two catgut ligatures formed the means of recognizing the original position of the now divided band. One of these ligatures was situated at the extreme point of a diverticulum two inches in length, and the other was placed upon the wall of the same loop of intestine at a distance of about six inches. A portion

of bowel about three inches in length between these two points of attachment was the part strangulated, was of an extremely dark color, with a deep sulcus at each side. The boy made an uninterrupted recovery and left the hospital on September 12.

The explanation of the condition found in the abdomen seemed to Mr. Clutton to be as follows: The vitelline duct had been obliterated at the umbilicus, and set free from the abdominal wall, but remaining patent towards the ileum, the lower end had become a pouch-like diverticulum from the intestine. This diverticulum terminating in a pointed extremity or cord—part also of the vitelline duct which had been obliterated—had remained floating about among the intestines till it became attached, as we have seen, to the bowel in contact with it. The gut between the two points of attachment had slipped beneath the chord which united them, and being unable to extricate itself had become strangulated.

ETHERIZATION BY THE RECTUM.

M. Mellièrre, surgeon-in-chief of the Hôtel Dieu, Lyons, gives an account of some operations for which, at the recommendation of Dr. Trersén, of Copenhagen, he induced anæsthesia, by administering ether by rectum. Only a small quantity was required, which was given by means of a double tube and Richardson's pulverizer. The results were very satisfactory and M. Mellièrre believes that this method is likely to render great services. It suppresses the stage of excitement, and the dose employed, which is reduced to a small quantity, can be strictly measured, while in operations on the face, the apparatus is not in the way of the operator. The inspiration of ether, too, which to some patients is so odious, is avoided. Further trials are required to fully estimate the value of this mode; but, thus far, it may be stated that in order to obtain deep anæsthesia, with a very small quantity of ether, it suffices to introduce a caoutchouc tube into the rectum, and bring this into communication with the ether flask, placed in a recipient containing water from 40° to 60° centigrade.—*Lyon Medical*.

THE SIGNIFICANCE OF JAUNDICE IN DIAGNOSIS.

Dr. W. E. Quine read at a June meeting of the Chicago Medical Society a paper in which, after alluding to the various theories that had been advanced in explanation of the obstructive and the non-obstructive varieties of jaundice, he pointed out that the attendant symptoms were mostly due to the presence of colorless bile acids, the bile pigment being harmless. Cerebral disturbance due to hepatic derangement, and associated with cholæmia, was not caused by the presence of normal bile, but by different though unexplained species of toxæmia.

Slight jaundice was often overlooked, and in some instances could not be distinguished from the cachexiæ, except by the discovery of bile acids in the urine; so that the diagnosis usually turned upon the discovery of the cause, and not upon the mere recognition of the effect.

Jaundice coming on suddenly during apparent health, and without pain, was usually of emotional origin and transitory. When it depended on disease or injury of the brain, acute atrophy of the liver, snake bites, or an infectious fever it was always associated with mental disturbance. If it was attended with fever, and was well marked, it was secondary to inflammation of the biliary passages, pneumonia, toxæmia, or infective inflammation of the portal vein. If it came on suddenly, and was preceded by paroxysmal pain and vomiting, it was caused, nine times out of ten, by biliary calculi. If it was preceded by typical symptoms of gastro-duodenitis, it was obviously of catarrhal origin. Impassable obstruction of the common bile duct was shown by jaundice of great intensity, by clay-colored stools, and, in recent cases, by distention of the gall-bladder. Jaundice caused by sudden obstruction of the biliary passages was always associated with paroxysmal pain and nausea, but there was no means of ascertaining the nature of the obstructing body except its discovery in the stools. In the rare cases of sudden obstruction by cancerous, hydatid, or aneurismal tumors, there was almost always a history of impaired health, enlargement and deformity of the liver, ascites, etc., which, together with physical exploration, would lead to a correct diagnosis. A sudden return of the natural color of the fæces would confirm a diagnosis of obstruction. Occlusion of the cystic duct might be attended with as much pain, nausea, and distention of the gall-bladder as occlusion of the common duct, but there would be no jaundice. In occlusion of the hepatic duct the same symptoms were present, including jaundice, and excluding distention of the gall-bladder. It was impossible to distinguish between occlusion of the hepatic and occlusion of the common duct, but the former was rare, because the duct increased in size from above downward. If jaundice persisted after the symptoms of biliary colic, or if catarrhal inflammation, had disappeared for a month, or if jaundice, having subsided after a biliary colic, returned slowly and without pain, it might be assumed that stricture of the duct had resulted, from inflammatory thickening, from adhesion of its walls or from the cicatrization of an ulcer. Repeated attacks pointed to gall-stones. If jaundice came on slowly without antecedent colic or catarrh, and without evidence of impaired health or of portal obstruction, it was probably caused either by pressure upon the duct or by the growth of a tumor within its walls. When the body producing the pressure was large enough, it might readily be appreciated, as in

the case of pregnancy, ovarian tumor, aneurism, distension of the colon, etc.; but, when it was small, or constituted by an enlargement of lymphatics in the fissure of the liver, it was apt to escape detection. Slight but persistent jaundice might be due to incomplete occlusion of the common duct or to complete occlusion of a branch of the hepatic, but usually it was found associated either with valvular disease of the heart, with some disease of the lungs which obstructed the circulation, or with cirrhosis of the liver. If ascites co-existed, the disease was either cirrhosis or cancer of the liver; if the liver was abnormally small, it was cirrhosis, and if it was too large, it was either hypertrophic cirrhosis or cancer, and the differentiation between the two was seldom attended with difficulty. Absence of jaundice did not imply absence of hepatic disease, since the liver might be destroyed by disease, or extirpated by operation, without jaundice ensuing. Jaundice was not a prominent symptom of hepatitis, if we rigidly excluded catarrhal inflammation of the biliary passages. Neither was it a feature of hepatic abscess, in which, at most, a mere muddiness of the complexion was usually seen. These affections were rare in temperate latitudes, and, when encountered, were generally found to be secondary to direct injury of the liver or to infective inflammation of the portal vein. Jaundice was not a symptom of waxy or of fatty liver, or of hydatids, except as an extraordinary complication.—*New York Medical Journal*.

AN UNOBJECTIONABLE FORM FOR THE ADMINISTRATION OF MEDICINES.

Of all the various forms in which medicine is prescribed, there is none so well suited for the administration of drugs possessing a poisonous influence, unpleasant odor or taste, as the manufactured pill form.

The advantages derived from prescribing remedies in this form are so apparent, that it was a matter of surprise to learn that their use was not more general. It is on this account that I present this short article, hoping that it may lead to more extensive use and appreciation of this valuable method of prescribing.

Manufactured pills will become more popular with physicians, as their value and advantages are recognized. They are so beautiful in appearance, so accurately compounded, so quickly dispensed, reducing the danger of making a mistake, on the part of the physician or druggist, to an almost impossibility.

They also enable the physician to carry with him, in a small and compact form, ready for administration, all the remedies that might be needed in emergencies, and night practice.

To the physician engaged in country practice, where his

patients are at a distance from a drug store, they become of especial value.

In that class of pharmaceutical preparations which exhibits medicines in an elegant and palatable form, without the sacrifice of quality, uniformity or accuracy, American pharmacists have been doing excellent work, the result being that most of the objectionable features which formerly pertained to manufactured pills have been removed, being now produced in such a perfect and attractive form, that the most fastidious patient can find no objection to urge against their use.

There is little doubt but that much of the popularity of Hahnemann's system of cure, based upon the maxim *similia similibus curantur*, is due, not to the truth of the law, but to the preference for the tiny, tasteless and attractive pellets; and the sooner the medical profession recognizes this, the quicker will the public see that, aside from pleasant doses, there is nothing but fallacy and error in homœopathy.

There are some drugs used in practice that cannot be administered in pill form, and there are instances where solutions are preferable. Such is the case in treating the various types of fevers, and where tonics are employed; but in the greater number of cases, the object desired is a continued influence, rather than an immediate impression upon the system, and for the accomplishment of this end pills are best suited.

In an article of this nature, it is not necessary or possible to dwell upon all the conditions to which the administration of remedies in the manufactured pill form are applicable, but to detail a few of the more frequent diseases, and specify instances where they have been used with success, during the past six or seven years.

The physician engaged in city practice sees no departures from health so frequently, as those associated with the digestion and assimilation of food. A majority of the patients presenting themselves for treatment, suffer from either a simple dyspepsia or some one of its many manifestations. The life led by people massed together in large cities is such an artificial one, the inhabitants being so subjected to the enervating influences surrounding them, that the indiscretions of diet, mode of living, anxieties, and the continual struggle for existence become active factors in producing the large number of dyspeptic cases.

There are certain conditions that cannot be relieved by dietetic and hygienic treatment alone, but require the use of drugs, which should be given in the most pleasant and unobjectionable form; as there is no class of patients so prone to find fault with their medicines, being best suited by doses that are attractive, tasteless and not bulky.

It will not be a digression to dwell upon the treatment of this common affection, as it will enable me to mention more

particularly the remedies suited for administration in the form under consideration.

The power of digestion being depressed, special aids to that function will be found in pepsin or alkalies; the anæmic condition may require iron, quinine or strychnia. Where remedies are needed, the action of which must be sedative, good results may be obtained from bismuth, opium, belladonna, arsenic or silver.

A very useful pill is that of aloin (one-fifth grain) and strychnia (one-sixtieth grain) given at bedtime; this will produce a mild, thorough, laxative effect, unloading the stomach and intestines, removing the foetid breath, the furred coating upon the tongue, and the cerebral congestion.

An error liable to be committed is the administration of carthartics of too active a nature; they are rarely called for, do little good, and might possibly do evil. Mild laxatives only are required, and care should be exercised as to their selection and frequency.

Formerly it was my custom to use pepsin and pancreatine more than at present, as recent investigation has led me to believe that as much benefit can be derived from the former agent alone, as when given in combination with the latter. Pancreatine has been shown to be itself digested by pepsin, so that its chance of getting through the stomach to the duodenum where it normally exerts its function, is very slight, while when combined with pepsin, it must be digested as soon as the mixture becomes warm enough, in or out of the stomach, to carry on the process. Yet we see many preparations of which the chief virtue is supposed to be that they contain *all* the digestive principles. These can be active only so far as they contain pepsin, and have no advantage over the simple drug.

It has also been shown that certain substances combined with pepsin in solution, render it inert. Alcohol is one, and even in moderation diminishes its action, while, in any quantity, the activity of pepsin is totally prevented. This is a point often lost sight of, and serves as a hint concerning the use of liquors at meals by dyspeptics.

Pepsin and bismuth are frequently combined when treating dyspepsia, and should always be administered in pill form, owing to the difficulty of keeping both agents together in a permanent solution, one requiring a somewhat acid menstruum, the other a neutral or an alkaline one. Nothing is more common than to see elixirs of pepsin, bismuth and strychnia, which darken, harden, and shrink the albumen placed in them. Liquid preparations are theoretically, if not practically, inconsistent, and will generally be found to be unsatisfactory.

In treating that form of dyspepsia met with in malarious districts and in persons who have passed the autumn months in the country, much good can be obtained from quinine, or a

combination of quinine, iron and arsenious acid, given after meals and for a length of time. When using quinine, the pill form is the best that can be resorted to, the soluble-coated pill possessing many advantages over the solutions, capsules or wafers. In an article upon quinine, published about four years ago, I called attention to the ready solubility of the bi-sulphate and urged its use, being the most soluble of the quinine salts used in medicine. On this account it is more active and better calculated for administration in pill form than the sulphate; but it should be borne in mind that as the bi-sulphate of quinine contains a smaller proportion of the pure alkaloid, the amount being only about sixty per cent., the dose should be one-fourth greater than that of the sulphate, in order to represent the same amount of alkaloid.

Iron is a most valuable remedy in the treatment of dyspepsia, but furnishes best results when given toward the termination of a course of treatment.

Active business men, brain-workers and those who are subjected to much mental anxiety or overwork, frequently suffer from what is termed "nervous indigestion." To meet this condition we possess a valuable remedy in phosphorus, which should be given in small doses, immediately after meals.

The best form of administering phosphorus is that afforded by the manufactured pill, which possesses many advantages over those made to order in the prescription room. A pill of this kind is exceedingly difficult to make, requiring especial care and skill. The phosphorus should be incorporated with the various ingredients while in solution, so as to effect a thorough and uniform diffusion; they should also always be coated in order to prevent oxidation. I have made some interesting experiments with phosphorus pills manufactured by Schieffelin, of New York, proving that their coating entirely protected the enclosed mass. A pill that had been manufactured a year ago was cut open and the mass found to be as soft as though made but a few days. Another pill, of the same manufacturer, made eight years ago, was found to be but little harder. Upon placing two of the latter pills in a small quantity of water, the coating was quickly dissolved, the mass broken up, and when placed in a dark room the vial was plainly perceived, owing to the unaltered luminous property of the phosphorus. This simple experiment goes to show that if properly made and coated, a manufactured pill does not become affected by age, nor do the various ingredients become so altered that they lose their medicinal properties. Experience has shown that such pills may be kept for years, even in a very warm climate, and still produce prompt and active effects when administered.

In treating the secondary forms of syphilis, the plan recommended by Dr. Keys, "of administering mercurials in granules," possesses many advantages over the older method of prescribing

ing the same substance in solution. Intestinal irritation seems to be later and less painful in its manifestations, it is an easier matter to regulate the quantity given when pursuing the "tonic treatment," and the granular form is the most convenient and portable for the patient. Certain cases will be encountered where the symptoms are so pressing that there is not time to get the patient quietly under the influence of the drug, when administered in granules, but fortunately such are not frequent, and can be met by resorting to the older methods until the urgent symptoms abate. The obstinate lesions occurring in the mouth are very successfully treated with granules, the patient being told to allow the little pill to slowly dissolve upon the tongue, thus obtaining the effect of a solution of corrosive sublimate upon the patches, while at the same time the general treatment is pursued.

In a case where the mucous patches in the mouth were very numerous and troublesome, no impression could be made upon them until the plan mentioned was tried, when they disappeared in a short time.

While pursuing the hyoscyamine treatment upon a patient afflicted with mental disease, the manufactured pills were of great advantage, as there was no doubt as to accuracy of dose, and they were easy to administer.

In a recent conversation with one of the leading alienists of this city, I was informed that he was using pills of this form upon several cases, considering them preferable to the hypodermic method.

When prescribing a medicine so powerful in its influence that doses of from one two-hundredth to one twenty-fifth of a grain are desired, it is almost impossible to obtain the exact amount in each pill, unless a large number are prepared at one time and a great care exercised in the manipulation of the mass. With drugs like arsenious acid, aconitia, aloin, atropia, codeia, digitalin, hyoscyamine, morphia, phosphorous, strychnia, and the more powerful mercurials, accuracy of dose and the decreased possibility of a careless mistake, are points in favor of the manufactured pill; while with such remedies as asa-fetida, quinia, and others possessing a very unpleasant taste, the coating removes the objection to their use, which patients so frequently make.

Little children who struggled and had to be forced to take quinine when prescribed in solution, powders or uncoated pills, will take the drug without objecting, when given in a coated pill.

In this article it has been my intention to point out a few of the advantages possessed by manufactured pills, over those prepared in the old and ordinary manner, and to speak of a few cases in my own practice, where the results from their use have been satisfactory. During the past seven years, the soluble-coated pills made by Schieffelin & Co., of New York, have

been the ones prescribed, and I do not hesitate to recommend them to the profession.

The "coating" of pills is a subject of much importance and of especial interest to physicians.

In a future article I shall bring to their notice some facts, to add to those published a number of years ago.—M. H. French, M. D., in the *Medical and Surgical Reporter*.

GALLIC ACID IN HÆMORRHAGE FROM THE URINARY ORGANS.

Gallic acid, according to the experience of Lionel S. Beale, M. D., (*Lancet*) is one of the most potent of ordinary stiptics in relieving hæmorrhage from the urinary organs. It should be perseveringly used in large doses for several days. As gallic acid probably acts according to the strength of its solution which bathes the bleeding tissue, it is necessary to insure the introduction of a certain quantity into the blood by the frequent administration of successive doses. It is rapidly taken out of the blood by the kidneys, therefore, the administration of frequent large doses is required to compensate for the constant loss of the remedy.

In chronic bleeding from the surface of the mucous membrane of the pelvis of the kidney arteries, bladder and urethra, and from villous growths, as well as in the very obstinate hæmorrhage from large fungous tumors of the kidney and bladder, gallic acid was found most valuable in a number of cases. In that spongy condition of the prostate when the veins are large and the capillaries of the surface considerably dilated, and forming here and there little pouches like aneurismal dilations, hæmorrhage is often not only very obstinate, but from time to time in such excessive quantities as to blanch and weaken the patient. The remedy should be given in frequent doses day and night until the bleeding is very decidedly lessened, when it may be ordered once in six hours, or less frequently, being again increased in frequency if the patient ceases to improve or the hæmorrhage again increases in severity.

Gallic acid seldom disagrees in any way. Some patients complain of its taste but it is generally well borne by the stomach. It does not cause constipation, and even when the crystals are swallowed in a state of suspension in water or mucilage, no inconvenience results, and the stomach is not disturbed by their presence. The glycerine of gallic acid is, however, the most pleasant form in which to prescribe the remedy. This contains one part of gallic acid in four. Forty minims will contain ten grains and may be given in distilled water, peppermint, orange or other water. But it is most essential that the patient should persist in taking the doses regularly for several days. Gallic

acid is absorbed by the blood and passes away unchanged in the urine, and it is probable that it acts directly on the parts from which the bleeding is taking place, and therefore a certain strength of solution is necessary to get the good effect, and this can only be obtained by its persistent introduction into the stomach and so into the blood at short intervals of time. The acid has been given in ten-grain doses every three hours without intermission for three weeks, no objection having been made on the patient's part. Dr. Beal has not determined whether much larger doses would be absorbed, or to what extent the remedy may be pushed, nor in what respect very large doses would be deleterious. He has never found it necessary to use larger than ten-grain doses.

MISCELLANEOUS ITEMS.

NORTH CAROLINA, West Virginia, Alabama, Florida, and Mississippi are the only Southern States that have no medical college.

THE University of Heidelberg is about to celebrate its five hundredth anniversary. The Baden Parliament has voted £8,000 to meet the expenses of the occasion.

DR. D. HAYES AGNEW has recently resigned his position as surgeon to the Pennsylvania Hospital, and the vacancy has been filled by the election of Dr. John H. Packard.

CREDE says that the instillation of a drop of a two per cent. nitrate of silver solution in the eyes of new-born children has reduced the number of cases of blenorrhœa of the eyes to one per cent.

DR. J. FIELD, of Kansas City, reports that in six cases of adherent placenta he has saved the woman by pumping cold water through the umbilical cord. In one case the patient was in convulsions when the after-birth came away.

MANY have become victims to the use of opium and morphine from the administration of these drugs for the relief of neuralgia. It is very gratifying to observe that such dangerous consequences may be averted by the use of tongaline or liquor tonga salicylatus, which is almost a specific in the acute forms of that complaint.—*Medical Brief*.

HOT MILK AS A RESTORATIVE.—A writer in the *Medical Times and Gazette* recommends the use of hot milk as a restorative. Milk when heated above 100° Fahrenheit, loses its sweetness and density, but has a most beneficial influence over mind and

body, when exhausted by labor or mental strain. Its effects are more invigorating and enduring than those of alcoholic stimulants.

FROM a foreign exchange we learn that Dr. G. A. Popow, of the assistant physicians of Prince Peter von Oldenburg's Children's Hospital, while engaged in examining the throat of a bad case of diphtheria, received on his lips and face some of the secretions from the child's mouth. In spite of the most careful cleansing, he was seized next day with shivering and the first symptoms of an attack of diphtheria, which within five days proved fatal.—*Medical and Surgical Reporter*.

DAMIANA AND HÆMORRHOIDS.—Dr. H. Speivere, of Belle Plaines, Minnesota, writes to the *Medical Record* that he "recently prescribed extract of damiana, in three grain doses to two patients, men who had sexual weakness, the result of excesses. After two weeks they reported improvement in sexual power, but both suffered from bleeding piles. One patient had had piles slightly years before, the other had never had them. They were both soon relieved after stopping the damiana."

REINDEER TENDON AS A LIGATURE.—Dr. Putiloff, of Onisk, in Siberia, reports that he has found the thread made from the tendon of the reindeer, for sewing in Siberia, a highly useful substance in surgical practice. For this purpose, it is first steeped in ether for twenty-four hours, and afterwards, for the same time, in a five per cent. carbolic acid solution. Thus prepared, the tendon is found to be stronger than catgut, and as soft as silk, and is completely absorbed in the wound.—*Centralblatt für Chirurgie*.

IODINE PREPARATIONS AND QUININE.—Rabuteau, in a communication to the Society de Biologie, called attention to the occurrence of digestive disturbances and disagreeable symptoms of the nervous system from the combined administration of iodide of potassium and sulphate of quinine. He claims that twenty-four hours should elapse between the administration of an iodide and the salt of quinine; and also warns against the use of quinine during the menstrual period as it sometimes gives rise to severe symptoms.

A NOVEL way of determining sugar in the urine is detailed by a correspondent of *l'Union Médicale*. It appears that the correspondent paid a visit to Ab. der Haman, a celebrated quack, who was forced to leave Algiers, and took his abode in the near neighborhood. A Frenchman belonging to the more educated classes had diabetes, and went to consult the charla-

tan daily, furnishing him with specimens of his urine at each visit. He also furnished a druggist with them to act as a check upon the Arab. The day that the latter announced to him the absence of all sugar in his urine the druggist corroborated the statement. The patient was astonished at the coincidence, and knowing that the Arab did not have recourse to chemical agents, asked him what method he employed. "The thing is very simple," quoth the quack, "I throw your urine on the ground near an ant's nest. The earth absorbs the liquid and the ants come out in number, attracted by the sugar, which tends to remain upon the surface. To-day they have not come out; hence, I conclude that there is no more sugar."—*Weekly Medical Review*.

TWO CASES OF RHEUMATIC GOUT.—Dr. Senier, of Waukesha, Wisconsin, in the *Weekly Medical Review*, says: Among the most unsatisfactory cases a physician is called upon to treat are those usually classed under the head of "rheumatism," but which are, perhaps, mainly due to an excess of uric acid, and would more probably be referred to "gout."

May 15, Mr. R., aged thirty-eight, presented himself, complaining of stiffness of muscles and joints all over his body, basilar headache, pain over upper lumbar region, frequent desire to urinate, though passing but a few drops at a time, and that causing him some pain and leaving a burning sensation along the whole course of the urethra. The urine was cloudy and deposited a heavy precipitate. Examination of the urine showed great excess of uric acid and urates. He was a large meat consumer and used liquors moderately, taking little exercise. I ordered him to stop his meat diet, moderate his use of liquors, take regular exercise daily, and after applying dry cups over regions of the kidneys, prescribed the lithiated hydrangea (Lambert's), one drachm three times daily, largely diluted with water. The first two days he stated that his urine was increased in quantity, but was very cloudy and deposited a copious sediment, though his headache and muscular stiffness, etc., had departed. Advised him to continue the medicine and take largely of mucilaginous drinks. To-day he says he is a "well man and feels twenty years younger." The second case was one of a similar nature in a man of sixty-five, who complained of an irritable bladder, frequent desire to urinate, and pain along course of urethra following the act. Prescribed the lithiated hydrangea in one drachm doses every four hours, largely diluted, and warned him to be careful about his diet. In one week's time he was urinating normally, and was, to all appearances, well. I believe the combination to be a happy one, and well suited to these troublesome cases, particularly where we have to treat the patient surrounded by the usual conditions of excesses at table and little exercise.

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ORIGINAL ARTICLES.

CHRONIC AURAL CATARRH.*

BY R. J. KIRKLAND, M. D., GRAND RAPIDS, MICHIGAN.

There is no single aural disease which comes to the notice of the practitioner more frequent, and yet about which so little is known, as *chronic catarrhal otitis*. To be sure, it does not possess the overwhelming importance of diseases which terminate fatally; yet from some of the distressing and aggravating symptoms which characterize it, and by its manifest readiness to yield to remedial measures when properly addressed, it is worthy of consideration in an assembly of this kind.

My principal object in presenting this topic is to show, in a simple manner, how one may differentiate between this affection and true *nervous deafness*, with which it is so often confounded.

In this affection there is always a pharyngitis in one of its various forms, a rhinitis or a combination of the two, consequently the patient is aware of an increased amount of secretion, a more or less sore throat, or uneasy sensations in the vault of the pharynx. The tonsils may be enlarged, there may be hypertrophy of the turbinated bones, more especially of the inferior. The patient may complain of a feeling of fullness in the ears, as though there was something in the exterior audi-

*A paper read before the Michigan State Medical Society at Grand Rapids, June 11, 1884.

tory canal, and insists upon its removal; this feeling may also be noticeable above the eyes in the frontal sinus. At times there is a fine crackling heard, produced by air passing through the secretion in the Eustachian tube. The voices of friends seem muffled. Not unfrequently is there vertigo, and depression of spirits. Now we come to the two most annoying symptoms, namely, the noises in the ears, and the deafness. The former is variously described, according to the condition of the patient and the richness of his imagination, though they usually agree as to its constancy. It is like the sound of a distant waterfall; the buzzing of bees; the murmur of wind in the forest; the chirping of crickets; the blowing of a steam whistle; the hum of machinery; the ringing of bells; the sound of a boiling tea-kettle; the babbling of a brook, etc. This tinnitus should not be mistaken for the jugular or carotid murmur sometimes heard in anæmic persons. The deafness is variable, ranging from a slight impairment of hearing to almost total deafness. Sometimes the deafness is only to certain tones, the capability of hearing all others being normal. With one person it may be sounds which have only a small number of vibrations to the second, or sounds of a low pitch which are not heard distinctly; while on the contrary another person may not hear well, or not at all, sounds which have a great many vibrations to the second, or tones of a high pitch, the intensity being the same in both cases. The deafness is not usually symmetrical in degree, being more marked on one side than on the other. In this, lies the chief manner of detecting the difference between this disease and nervous deafness. Upon placing the handle of a vibrating tuning fork upon the forehead or between the teeth of a person whose hearing is normal, it will be heard slightly in both ears. If, now, one ear be stopped with a pledget of cotton or the finger, the sound will be more marked on the side which is closed. A plug of cerumen will act in the same manner as the cotton. Now, if a person suffering from catarrhal deafness be subjected to the tuning fork test, he will almost always state, in answer to your question as to which ear he hears the best in, "this one," and point to the better ear; but on repeating the experiment and asking him to observe carefully, he will change his answer, and reply, with a look of incredulity, that he hears it better in the deaf ear. He cannot believe his senses. A recital of the various explanations which have been advanced to account for these phenomena would involve too much time. Those who are sceptical can easily verify their truth. If a person who is afflicted with nervous deafness be tried with the tuning fork, he will not hear it at all if both ears are involved; or if but one he will hear it only upon the sound side. Upon inspecting the net, we see changes which are slight, but yet are readily appreciable, even to one not initiated into the inscrutable

mysteries of aural affections. There is usually a slight opacity of the whole membrane; it is sunken in, or rather retracted, making the short process stand out like a little button, and causing the handle of the malleus to appear shorter by reason of its inclination inwards. As a rule, too, the triangular light spot is changed in shape or location, or it may be divided, or absent altogether. Calcareous deposits may have taken place. If the catarrh has lasted a long time, adhesions may have formed between some parts of the middle ear. This can be determined by means of Siegle's otoscope; make suction, and watch the excursion of the membrane. If the various parts move disproportionately, or some part not at all, one may be sure of adhesions. Its mobility will be somewhat impaired as a rule by reason of the thickening that has occurred.

It is not difficult to find the causes of this affection, when ninety per cent. of all persons have some form of catarrh. It is simply an extension of the inflammatory process by reason of continuity of tissue; or the pharyngeal mouth of the Eustachian tube is more or less closed by the encroachment of hypertrophied tonsils, inferior turbinated bones, or admoid vegetations.

The progress of the disease unless arrested by treatment is variable. Frequently it reaches a certain point and then ceases to advance, but in the majority of cases, it goes on to almost total deafness. The everlasting, peace-destroying tinnitus never intermits, and to persons of a delicate organization, this is worse than the deafness, instances are known when persons have committed suicide in order to rid themselves of its harrowing presence.

Dissection has revealed the pathological condition to be collections of mucus filling and distending the middle ear and Eustachian tube, a thickened mucous membrane, and filling up of the cavity by lymph.

Before saying anything in regard to treatment I wish to quote a paragraph from Dr. Roosa's excellent book:

"It may be safely asserted that most of the persons in the United States, who suffer from the form of disease under consideration, are in the habit of waiting for a period of from five to twenty years before they attempt to get relief. We must certainly diminish the number of these cases before we can hope for brilliant results. The neglect of aural therapeutics by the last and preceding generation now recoils upon us. Patients come very late for advice about their ears, because they have been taught, not by the laity, but by wise and skillful physicians, that it is not prudent to meddle with the ears; that they will outgrow its diseases, as soon as their constitution is invigorated; if young girls, that when the menstrual function comes on they will be all right, and so forth, while during this time of delay, adhesions between the membrana tympani and the ossicula, and the walls of the tympanum have been form-

ing, and hypertrophy of the mucous membrane and atrophy of the tendons of the intraauricular muscles have occurred."

The treatment of this affection is comparatively simple. A vast number of methods have been in vogue at different times, but the majority of aurists have settled down upon inflation of the middle ear in one of its forms, and treatment of the catarrhal condition. The Politzer bag is commonly used with children, and the Eustachian catheter with a simple rubber bag in adults. If there are enlarged tonsils they are removed; if the turbinated bones are hypertrophied, they are removed with a snare, acetic or chromic acid, or the galvano-cautery; admoid vegetations are scraped off or cauterized. If there is a simple rhinitis or pharyngitis it is treated with astringent and alterative sprays, or with the post-nasal or anterior nasal syringe. Very few physicians inject the Eustachian tube or middle ear; if so, it is with a very weak medicament. There is great danger of inducing an acute otitis. I generally use Siegle's otoscope as an accessory, and I think with happy results, especially if adhesions have formed. One case I have in mind where the drum membrane was adherent to the promontory. Suction was employed with the result of breaking up the existing adhesions, an improvement of the deafness, and a cessation of the tinnitus. To be sure, the net was ruptured, and there was a purulent discharge for a few days, but the perforation soon healed leaving only a small cicatrix.

Nervous and catarrhal deafness are almost always confounded. Nervous deafness is rarely curable, while the catarrhal form frequently is. The two are easily differentiated, there being no excuse for condemning so many persons to the lifelong trial of deafness and ceaseless ringing in the ears. It is by means of inspection of the external auditory canal to see that there is no impacted cerumen, and the reaction to the tuning fork that the differential diagnosis is made.

FOUR CASES OF PUERPERAL ECLAMPSIA.

BY C. H. JOHNSTON, M. D., SUTTON'S BAY, MICHIGAN.

Case I.—December 15, 1883, I was consulted by Mrs. S. F., aged forty-two, who was eight months advanced in pregnancy. She had suffered from anterior displacement of the uterus and from kidney disease for years, and from general anasarca for about one month. As it was fifteen years since her last childbirth, and her health was very poor, she was apprehensive of serious trouble at her approaching confinement, and both she and her family were firmly convinced that she would die with convulsions, some of her relations having suffered death from that cause. I examined her urine, found considerable albumen

in it, prescribed acetate of potash, tincture of iron and tincture of digitalis, and ordered milk diet. During the following month I examined her urine repeatedly, and as the albumen lessened in amount, and the dropsy did not materially increase, the above treatment was continued.

On the morning of January 19, I was summoned to attend her in confinement, and was told she had been having labor pains for three or four days which had reduced her strength considerably. The pains were then weak and ineffective, and I found the uterus extremely anteverted. Upon my restoring the womb, and retaining it with an abdominal bandage, the pains became stronger and more frequent, and the child was born at 12:30 o'clock, without any complication. I congratulated the mother upon her escape from the convulsions she so much feared, but which she intimated she still expected, and left her feeling quite comfortable.

About 3:30 o'clock her husband called for a prescription for his wife's vomiting, which was very persistent and distressing, and in a few minutes a messenger came saying she was in spasms. We hastened to the house three miles distant, and found her in the third convulsion. I quieted her with chloroform, administered one-half grain morphia hypodermically, and placed two drops of croton oil on her tongue. She soon came out of the convulsion, and partly regained consciousness. In one-half hour I repeated the injection of one-half grain morphia, and gave per mouth thirty drops, bromide of potash and twenty grains chloral hydrate. But in about forty-five minutes after the last convulsion she went into another, after which she remained profoundly comatose until a short time before death. Her face was almost black, breathing stertorous, pulse 160 per minute, skin hot and dry, and during the night a steady stream of foul smelling purulent liquid flowed from her mouth, which her husband thought came from an abscess she had long supposed to exist in her left lung. I applied cold to head, heat to extremities, gave tincture of digitalis, aromatic spirits of ammonia, etc., and Dr. Ingersoll, of Traverse City, whom I summoned for counsel, suggested ligating the lower extremities, which was done. But nothing seemed to benefit her in the least, and she died about 9 o'clock the next evening from exhaustion. I think her terrific fever was caused, in part at least, by absorption of purulent material from the abscess. Her bowels did not move at all, although given several doses of elaterium in addition to the croton oil. No postmortem would be allowed.

Case II.—February 13, I was called to visit Mrs. J. C., who, the messenger said, was having spasms. She was a young French woman, eighteen years of age, of great strength and vigor, in the ninth month of pregnancy, and a primipara. She began having convulsions at 6 A. M., and at 9 P. M., when I

arrived she was in a lethargic condition in which she would occasionally roll up her eyes as if about to have another convulsion. Her pupils were contracted, pulse rapid, skin hot and dry, face and eyes intensely congested.

I administered compound jelap powder in repeated doses which towards morning produced several watery evacuations, during one of which a round worm about one foot long and one-fourth inch in diameter was passed. I also gave potassium bromide and chloral every two hours, applied cold to head, gave one-eighth grain, pilocarpin hypodermically, and wrapped her up in sheets wrung out of hot water every fifteen minutes till free perspiration was excited. Towards morning her condition seemed to improve, and after inserting a gum catheter between the uterus and its membranes to induce premature labor, I left her.

On returning at noon, her general condition was about the same as when I left; but uterine contractions had begun, and she would occasionally roll about as if slightly sensible of the pains. I ruptured the membranes, and at 5 o'clock, the child no longer making progress, I extracted it with forceps, dead. After this she recovered consciousness sufficiently to speak when addressed, and I returned home thinking she might possibly recover, leaving what medicine I thought necessary. The night of the 15th her brother called saying she was worse, and wanted some medicine for her fever. I gave him dextro-quinine. I afterwards heard she died the afternoon of the 16th. I did not return owing to the distance, ten miles, and as I was not requested to by the family.

Case III.—May 9, I was summoned to the bedside of Mrs. W. P., a plethoric young woman, of eighteen years, who was in the ninth month of her first pregnancy. She had been having convulsions from 2 A. M. until 11:15 A. M., when I arrived. She was then perfectly unconscious, and remained so till death. I entertained no hope of a favorable termination, but determined to do all I could to assist her. I applied cold to head, gave one-half grain morphia hypodermically, one-fourth grain, elaterium, and bled her to the extent of six or eight ounces. At 11:25 she had a convulsion. At 11:30 I injected thirty grains each of chloral and bromide of potash into rectum, and began wrapping her up in hot sheets every fifteen minutes, which was continued till perspiration was excited. At 12:20 she had another convulsion, and at 2:30 I repeated the injection of chloral and bromide and gave two drops of croton oil. The os being now partly dilated I ruptured the membranes and at 2:30 extracted with forceps a dead child. The patient was so insensible that she did not notice the extraction. She died at 4 o'clock.

Case IV.—After my three former experiences I sincerely hoped that I would be called upon to attend no more cases of

puerperal convulsions; or, at least, that cases coming in my care in the future would not be so complicated as was my first case, or so far advanced as Cases II and III, as to offer little or no prospect of successful treatment. But it was not long before I had another case.

At 3 o'clock P. M., July 7, I was called to prescribe for Mrs. J. M., aged eighteen, who had awaked at 2 A. M. with a violent headache, and who, a few minutes before my arrival, had rolled up her eyes and behaved very curiously. She was in the ninth month of her first pregnancy. Her face and extremities were considerably bloated, and I immediately saw what was coming. While questioning her, she suddenly went into a well-marked convulsion, whose violence soon abated under the influence of chloroform. The attack was of short duration, and upon her regaining consciousness I applied cold to head, and at 3:10 o'clock gave her thirty grains each of chloral and bromide of potash, one-eighth grain elaterium, and administered an enema of soap and water. At 4:10 I repeated the chloral and bromide; her head now began to feel better. At 4:40 I gave one-eighth grain pilocarpin hypodermically, and gave a hot air bath, which measures were followed with profuse perspiration. Her bowels not yet having moved, and her stomach being quite irritable, I prescribed several one-half grain powders of calomel to be given every hour, and thirty grains of bromide of potash, and twenty of chloral every three or four hours. The next morning I found my patient quite comfortable. Her bowels had moved twice during the night, her headache had disappeared, and the œdema of face was considerably less marked. I ordered a hot air bath every morning, enough compound jalap powder to procure one or two watery evacuations each day, cream of tartar, lemonade, *ad libitum*, milk diet, and next day to commence taking tincture of iron and tincture of digitalis.

On the morning of the 12th I served her in confinement, which was unattended with any complication. Her headache had returned slightly about midnight, but had been dispelled by a dose of chloral and bromide of potash.

REMARKS.—One object in presenting these cases is to call attention to the fact that treatment of puerperal eclampsia, to be successful, must be prompt. When the case has advanced so far that the patient is rendered profoundly unconscious by the intense cerebral congestion and œdematous infiltrations produced by it, treatment can do but little. Derangements of the kidneys, which are very prevalent here, have a strong predisposing influence, and probably account for my unusual experience of meeting four cases in less than six months. No doubt the condition of the mind of patient number one, rendering her susceptible to any irritating influence, had considerable influence in determining her attack, for the same

reason that nervous children are more apt to suffer convulsive attacks from any peripheral irritations than their less irritable and impressionable companions. I think chloral and bromide of potassium are more efficient in controlling the convulsions than injections of morphia so highly extolled by Loomis of New York City.

ORIGINAL TRANSLATIONS.

Translations from German Journals for THE PHYSICIAN AND SURGEON.

BY CONRAD GEORGE, M. D., ANN ARBOR, MICHIGAN.

ARSENIC IN MALIGNANT LYMPHOMA.*

In October, 1880, Dr. Israel, Chief of the Jewish Hospital, Berlin, brought before this society a patient cured of malignant lymphoma with arsenic. Since that time this patient has remained under observation, and three additional cases have been successfully treated with arsenic at the Jewish Hospital of lymphoma, a disease which Billroth, as late as 1876, pronounced incurable. That the prognosis of malignant lymphoma is not so extremely fatal, and that a relative condition of fair health can be maintained, will be demonstrated by the following cases:

According to Winiwaters, the disease now recognized as malignant lymphoma, as differentiated from other glandular enlargements, consists of those rapidly growing forms of multiple tumors which first attack the glands of one region, most frequently of the neck, extend rapidly to neighboring glands, then invading the lymphatic glands of the axilla, those of the inguinal regions, and invades the larger cavities of the body, the bronchial and abdominal glands are involved, and finally forms metastatic tumors in the internal organs. Their localization extends along the lymphatic canals. According to their consistency they can be classified into a hard and a soft form. Microscopically, the first consists of an excessive hyperplasia of the lymphatic gland, which differs from an inflamed swollen gland only in that the swelling involves all the tissues of the involved gland; in the hard variety the structure of the gland is replaced by fibrillous connective tissue which is the end product of the proliferation from which the soft variety originated. An important factor in its differential diagnosis from sarcoma of the lymphatics consists in the line of demarcation; the swelling is invariably confined to the gland itself, and does not involve surrounding tissues, that is, it does not become heteroplasmic, nor does it extend to neighboring lymphatic

* Report of a paper read by Dr. Karewski before the Berlin Medical Society.

glands. Each gland becomes separately involved, the tumefaction of all the glands in a region forming a tumor of large size in which the individual glands can always be distinctly traced by palpation.

An exact diagnosis is of the greatest importance in estimating the therapeutic results of the remedy. Sarcoma of the lymphatic glands which manifests frequently a great similarity to malignant lymphoma, differing, however, in its tendency to become heteroplastic and to form adhesions between the individual glands of a region as well as in other inflammatory symptoms, remains entirely uneffected by arsenic, and this fact explains probably a number of the reported failures with the remedy. The four cases of this report demonstrate the characteristic course of malignant lymphoma.

Case I.—Treated four years ago. A woman, aged sixty-five years, of dusky, greyish-yellow color of skin, almost deaf, and incapable of distinct speech on account of large tumors in her throat. The lymphoma involved the glands of the neck, axilla and inguinal regions. The internal organs presented nothing abnormal.

Case II.—A woman, aged sixty-two years. Enlargement of tonsils, submaxillary, cervical and supraglaviular glands. The axillary and inguinal glands were also involved. Internal organs normal.

Case III.—A man, aged sixty-five years. He was first affected six months before entering hospital. Swelling of the glands all over his body had gradually taken place without causing any especially annoying or painful symptoms, accompanied subsequently by a harassing cough. When admitted he was cachectic, of pale, haggard appearance. Skin dry and scaly. The glands of the neck forming tumors varying in size from a hen's egg to a cherry, partly of doughy and partly of firmer consistence. The tonsils were greatly swollen. Inguinal and axillary glands greatly enlarged. He was further affected with a diffuse bronchitis and great enlargement of the liver and spleen. The liver extending one and three-quarters inches beyond the arch of the ribs, and the spleen nearly two inches.

Case IV.—A woman, aged forty-six years, was the most severely affected. She was supposed to be suffering from phthisis without ever having had a cough. In August, 1881, she first noticed a tumor on her neck causing but little annoyance, which was treated ineffectually with various remedies and applications. In the meantime, having undergone herniotomy under Langenbeck, after which operation the tumor decreased somewhat in size, but became subsequently again enlarged, so that she applied to the Charity Hospital for relief. Here she was quickly relieved of her tumors by Bardeleben, through extirpation. The patient characteristically describes

them as having the appearance of calf kidneys. (Incised lymphoma have in fact the appearance of calf kidneys). A recurrence of the tumors occurred four months after the operation, causing, however, so little annoyance that she refused another operation, recommended by Bardeleben. In April, 1883, when she had become affected with a harassing cough in addition to her old complaint, she sought relief at the Jewish Hospital. She was poorly nourished, menstruation irregular, without fever, and feeling comfortably well, troubled only by a harassing cough. On physical diagnosis a diffuse bronchitis alone was diagnosticated. All symptoms of serious inflammation of the lungs were wanting, and oft repeated microscopical examination of the sputa failed to find either elastic fibers or bacilli. The liver extended an inch beyond the arch of ribs, and the spleen to the crest of the ilium. The respiration was labored and stridulous, speech heavy, as if hindered by insufficient circulation of air. The tonsils almost met in the center. Over the entire body of the patient tumors involving the lymphatic glands were situated along the lymphatic canals. The largest were in the sides of the neck, and the axilla and inguinal regions. All lymphatic glands were found enlarged, and especially those of the retroperitoneal region; here a tumor of the size of a man's head was readily diagnosticated from other abdominal organs.

The following characteristic symptoms were observed in all four cases: (1) That the skin was freely movable over the tumor and free from inflammation; (2) The tumefaction, from which the individual tumors originated, had neither coalesced with one another, nor become intergrown with surrounding tissues; (3) The tumors were entirely free from pain on pressure; (4) From the larger conglomerations a chain of smaller tumefied glands running downwards was invariably observed, a phenomenon especially noticeable in the axillary region. There could be no doubt as to the diagnosis of malignant lymphoma. The severe bronchitis in Cases III and IV was caused by the pressure on the bronchial tubes by the tumefied bronchial glands.

These four cases were treated with arsenic. The first and third with injections of Fowler's solution, and the same preparation internally. The second case was solely treated per os, and the fourth case was treated with arsenious acid, in various forms and modes of administration, on account of the peculiar idiosyncrasy towards Fowler's solution.

Three cases were cured, if a reduction of the glands to a very small size, can be called a cure. One case left the hospital greatly improved. One of the cured cases died subsequently of acute phthisis. Medication was conducted in the usual manner, that is, equal parts of Fowler's solution and tincture rhei, or tincture ferri, in doses of from six to twelve drops

until contraindicated by symptoms of intoxication. For parenchymatous injections Fowler's solution was used with equal parts of distilled water and one-half per cent. carbolic acid added for preservation of the mixture. The syringe must be cleansed with boiling water or a five per cent. solution of carbolic acid. The dose of the injections was gradually increased from two drops to half a syringe-ful. The injections were made slowly and the entrance of air carefully avoided. The needle was plunged directly into the tumors. The immediate local effect of such an injection scarcely differs from any other hypodermic injection. After an interval of several hours neuralgic pains ensue, which do not, however, become very severe. The question whether these injections give rise to inflammatory symptoms or even septic processes is of greater importance. Such symptoms were never observed after the parenchymatous arsenious acid injections, and necrosis of the glands was only twice observed to follow forced injections of large quantities, causing destruction of glandular tissues, which should be carefully guarded against. Fluctuation occurred at the seat of puncture. On incision a small quantity of pus, together with the bloody glandular detritus, was evacuated. After several days the small wound had completely healed under antiseptic dressing. This fact is of importance, for several authors state to have observed long continued suppuration, and even septic inflammation, to follow injections of arsenic into malignant lymphoma. This accident may be the result of insufficient antiseptic precautions. Attention must be paid to the arsenic solution, which is prone to decomposition; it should always be used fresh, and never after it has become turbid. For place of injection the author selected the tumors of the neck as being both the largest and most readily accessible; oft repeated injections into the same tumor do not cause inflammation, at most they become more painful in the indurated tissues. This increased sensibility alone gave occasion to change the seat of injection, besides, occasionally places were selected where it was desirable to remove the tumors more rapidly, as the tonsils. Dangerous swelling followed injections into these glands which required the application of ice and careful attention.

The place of injection, however, is entirely irrelevant as regards the general cure. The tumors of the entire body are affected similarly by the arsenic injections irrespective of the seat of injection. The local irritation of the injection, and the deposition of larger quantities of arsenic, alone causing a more rapid resorption at the point of injection.

Of the effects of arsenic the symptoms of poisoning must first be considered, and these need only be mentioned: Burning sensations in the throat, abdominal colic, diarrhoea, and, above all, loss of appetite, are the indications for suspending

treatment in these cachectic individuals. When injections alone are used these symptoms appear much later and are then generally induced by the simultaneous use of arsenic internally.

In Case IV, Fowler's solution was not well borne by the stomach and after several weeks of injections a peculiar dry papular eruption appeared on the extensor sides of the extremities. It was of shinny yellow-red color and accompanied by such an intolerable itching as to rob the patient of sleep by night and rest by day, thus reducing her strength rapidly. The exanthema observed by Goubeyre, Macnal and Pereira, had the appearance of measles and was differently located. In the author's case the eruption subsided rapidly on withholding Fowler's solution, and was subsequently not reproduced when arsenious acid was administered. The arsenious acid given in pills with quinine was well borne by the stomach; it increased the appetite and improved the general condition, and caused rapid disappearance of the tumors. In cases in which Fowler's solution is not well borne arsenious acid may thus be profitably substituted.

The arsenic fever is a symptom characteristic of the constitutional action of arsenic. Winiwaters observed it in most of his cases, often already after the fourth or sixth dose, whether given internally or by injections. The author's experience differs somewhat. With the exception of the first case in which the fever occurred from time to time at the recurrence of the lymphoma, a steady intermittent fever was only observed in the fourth case. It commenced three weeks from the time of treatment, necessitating frequently a discontinuance of treatment, always commenced anew with renewal of treatment, and terminated finally in severe hectic fever which disappeared only after arsenic treatment had been discontinued for fourteen days. During the continuance of the fever, which for a time caused no disturbance of the general condition of the patient, the tumors gradually decreased in size. When the arsenic was withheld the tumors increased again in size, thus necessitating the renewal of the treatment. Finally, when the tumors were reduced to cherry size and hectic fever had supervened, treatment was discontinued. The tumors did not commence to grow again, but six weeks from cessation of treatment the patient was attacked with acute tuberculosis.

It is difficult to account for the arsenic fever. It might be considered as a resorption fever incident to increased tissue oxidation. The tumors are, in fact, resorbed, and physiologists contend that the physiological action of arsenic depends on increased tissue metamorphosis, but according to their views, this takes place without increase of temperature. In chronic arsenicalism the temperature is lowered; in support of this stands the fact that not all the cases of malignant lymphoma, in which

tumors are resorbed under the use of arsenic, were febrile whilst under treatment. On the other hand the tumors are not always reduced, although the patient is suffering from the fever, as observed by Winiwaters; again, patients treated with arsenic for other diseases have a lowered temperature; and finally arsenic is under certain conditions an antipyretic.

In considering the action of arsenic on the tumors, the author, as stated, observed a decided diminution in size in all his cases, and in only one case—the patient leaving the hospital—a cure was not accomplished. This shrinking is already observable after a few injections, the patients themselves observing it most readily; their breathing becomes easier, speech improves, and hearing, which was impaired on account of displacement of the Eustachian tubes, becomes much finer. In the first few weeks of treatment resorption takes place with marvelous rapidity; later, although progressing steadily, it is slower. In from six to eight weeks tumors of egg size become reduced to cherry size, smaller tumors in a like proportion. First of all, and most characteristically, the tumors of the neck become smaller, evidently on account of being exposed to the most intense action of arsenic. The other lymphatic glands become simultaneously involved, especially so, the retroperitoneal glands, as could be readily shown in the last case. After eight weeks of treatment this tumor, originally as large as a man's head, had become reduced to a small impaction hardly to be felt through the abdominal walls. The hypertrophied tonsils are the most resistant, but finally they are also reduced to normal size. The distinct separation and independence of the individual glands (forming a larger tumor) which on first sight seem to be wanting, and which is the most important factor in the differential diagnosis between malignant lymphoma and sarcoma of the lymphatic glands, become more and more distinct with the reduction of the tumors. Occasionally pains arise in the injected glands but not invariably as stated by Winiwaters. The enlargements of the liver and spleen complicating the lymphoma were also reduced. The presumptive swelling of the bronchial glands seems to be reduced, for the annoying cough and the loud bronchial rales become improved and finally relieved entirely.

This shrinking of the tumors is, however, not accompanied with a simultaneous improvement of the general health. Although the patients feel much easier, their cachexia remains, being sometimes even augmented. Their appearance becomes miserable, the skin becomes shriveled and of pale greyish-yellow color. They first gain flesh and general health after the cure is completed and arsenic discontinued. Later recurring relapses, if not left too long without treatment, do not again deteriorate the general improved condition.

The blood was of course examined. As is well known the

red corpuscles are frequently found diminished in numbers in malignant lymphoma. Arsenic does not alter this condition, in fact, the leucocythæmia was occasionally found increased under the arsenic treatment. Besides, ruby red crystalloid masses are frequently found in the blood after the use of arsenic, and very large white corpuscles which seem to have eaten these masses. This probably denotes a transition of the red corpuscles under the influence of arsenic. The remarkable greyish-brown color of the skin arising after the treatment has been continued for some time, may be caused by the change in the red corpuscles.

In regard to the relapses the author can report but one case which was closely observed. The first patient had a relapse eight months after treatment had been discontinued. She was relieved of it in a few weeks and afterwards kept under the steady internal use of arsenic whenever the tumors commenced to grow again. In this manner she has remained under treatment to the present time, April, 1884; she feels perfectly well and is now of entirely healthy appearance. It is remarkable that the first relapse occurs always at the tonsils. In the fourth case, as long as the tumors had not become entirely reduced, there was a decided tendency to renewal of growth if arsenic was discontinued for only a few days. In this case the tonsils also commenced first to enlarge. Winiwaters, who observed cases lasting for two years, saw in one case which had been dismissed before being cured, a rapid recurrence of the tumors.

The question as to the *modus operandi* of the cure of malignant lymphoma with arsenic cannot be solved by the author. It is certain that arsenic develops its constitutional action, hence the shrinking of the tumors cannot be considered as the result of localized inflammation. All the tumors have been reduced both from internal medication and continued injections into the same glands. Yet, whether this process of resorption takes place through increased tissue oxidation, as has experimentally been demonstrated, or whether the remedy develops antiseptic curative properties—the lymphoma having been considered as infectious tumors—or finally, whether arsenic has a specific action on these tumors, are all questions for hypothetical speculation. Finally, it remains for consideration whether in cases in which the resorption of the tumors is accompanied by fever, this is the cause or the result of the involution, for malignant tumors are known to disappear occasionally during intercurrent febrile diseases.

It also remains to be considered whether the arsenic treatment may not become dangerous as systemic poisoning. When arsenic is used so frequently, and of late having come to be considered as a panacea for all infectious diseases, and especially so for tuberculosis, it seems almost superfluous to seriously entertain a doubt as to the safety of its use. Cases of

malignant lymphoma do not require more arsenic than cases of tuberculosis, and with less beneficial results in the latter than is obtained in the former disease.

The author reports an observation of the action of arsenic on tuberculosis as noticed in Case IV. The sputa of this patient had been frequently examined for bacilli with negative results on account of her severe bronchitis. As her bronchitis remained unimproved after resorption of the tumors had begun the sputa was frequently examined, yet in August, 1883, it remained free from bacilli and no consolidation was noticeable in the lungs. Towards the middle of August the arsenic was discontinued, the tumors having almost disappeared, and a severe form of hectic fever existing. The patient recovered for some time, but in September she became very weak and was confined to bed and the author lost sight of her for several weeks. In October infiltration of both apices was clearly distinguishable and bacilli were now found in the sputa. Cavities had formed towards the end of October and her death occurred in December. It is difficult to say in how far arsenic hastened the final result. The woman was hereditary consumptive, her constitution was poor, and her social condition deplorable. In her case no more arsenic had been used than in the other cases. Arsenic did not protect her from tuberculosis.

The author concludes from his observations that arsenic is both a safe and valuable remedy for malignant lymphoma. Although it does not protect against relapses it is equally efficient in them, and if the patients are kept under observation, by its timely use, the relapses can never assume proportions dangerous to life.

Compared with extirpation, arsenic deserves undoubted preference for relapses, beyond the reach of the knife have always followed these operations. Therapeutic preference should therefore be in favor of arsenic, and all operative interference restricted to cases in which dispnoea becomes dangerous, and then followed by general treatment.—*Berlin Klin. Wochenschrift.*

TREATMENT OF ANASARCA WITH DRAINAGE OF THE CELLULAR TISSUE.

Anasarcaous limbs have been punctured with great success by Southey, Sicher and Traube. Carl Kopp (*Lyon Med. and Schmidt's Jahrbucher*) uses canula and trocar. A rubber tube is attached to the canula, through which the fluid is carried to a vessel placed between the patient's legs. The parts are enveloped in salicylated cotton wadding. In severe cases several canulæ can be inserted at the same time. They can be left in place twenty-four hours. The operation can be repeated after several days. In twenty-eight cases erysipelas set in in eight, and local gangrene in four cases.

HOSPITAL REPORTS.

MICHIGAN STATE HOSPITAL.

SURGICAL CLINIC.

UNDER PROFESSOR DONALD MACLEAN, M. D.,

Professor of Surgery and Clinical Surgery in the University of Michigan.

REPORTED BY FRANK M. GIER.

LARGE NÆVUS OF FACE: ELECTROLYSIS; GOOD RESULT.

Ida G., Greeley, Kansas, aged eighteen. Admitted to the hospital April 11, 1884.

History.—The tumor began as a small blue spot when the patient was two weeks old. It gradually increased in size until she was fourteen years old; since then it has remained about the same size. It has become of a brighter color, and the patient thinks it may have decreased some in size. The growth involves the lower eyelid, the cheek, side of the nose, and upper lip. It extends out nearly to the angle of the jaw and the root of the ear. The skin is mottled with dark purplish spots and lines. The disease extends through all the structures of the cheek, and is plainly seen and felt under the mucous membrane.

April 12: Brought before the class and examined. Diagnosis—Venous nævus.

April 16: Patient given an anæsthetic and the operation by electrolysis was made. Power, twenty volts. The large fork-shaped needles were plunged deeply into the tissue of the tumor, and when the tumor had become a firm, hard mass the current was reversed without changing the needles. Time required to have solid coagulation, eight minutes. Amount of chloroform used, four and a half drachms. Time for anæsthesia, four minutes.

April 19: Patient in good health and spirits. Growth larger than before the operation. The electrolysis was not followed by chill or any other unpleasant effects. For a short period after the operation the tumor was slightly painful. A small hypodermic injection of morphia was given soon after the operation, which was repeated in the evening. A throbbing sensation is felt at times, otherwise no change but the hardened condition noticed by the patient.

May 1: The tumor has remained hard and solid. It has slowly diminished and is now about the same size as before the operation.

May 14: Result of operation shows little or no improve-

ment. Mass of growth has not decreased any or but very little. The skin is not so dark in color.

The patient was shown to the class and then given an anæsthetic, and the electricity used the second time. Power, same as first operation. Needles introduced at other points and left in the tissues seven and a half minutes. Just before they were removed the current was reversed. Mass very hard; skin dark. Amount of chloroform, six drachms. Time for anæsthesia, four and a half minutes.

May 15: Face on the side of operation very much swollen. The lower eyelid crowded up, completely closing the eye. There has been but a very slight degree of pain. No bad symptoms.

May 18: Swelling subsiding. No pain. Appetite good.

May 20: Swelling diminishing. Continues to remain hard. A slight discharge escapes from one of the needle punctures. No pain.

May 25: Effects of operation becoming more marked. Swelling rapidly diminishing. The contracting tissue remains hard; intensity seemingly increasing. The eyeball no longer concealed. Vision not injured by the electricity.

May 31: Growth very much less than before the electrolysis. Swelling all gone from the cheek. The large mass projecting from lower eyelid is not much reduced, and remains hard and dense, but dropping away from the eyeball no longer interferes with seeing.

June 2: The patient compared with a photograph taken before operation: tumor greatly reduced in size.

June 4: The growth involving the lower eye lid retains much of its prominence and density. Anæsthetic given and the greater portion of the tumor removed. The mass measuring two by two and one-half inches. The incision produced very little hæmorrhage, the electrolysis having changed the vascular structure of the growth into a mass of fibrous tissue.

June 6: Wound healing rapidly. A very slight degree of the previous deformity exists.

June 14: Dismissed.

CHRONIC INFLAMMATION OF THE TARSAJ JOINTS.

George L., aged nineteen. Admitted to the hospital February 14, 1884. Occupation, common laborer.

History.—His last employment was such that he was compelled to work in the mud and water much of the time. His trouble first began in September, 1883. He was able to continue at his labors for about six weeks after he first experienced pain and failing in use of his foot, but soon became so lame that he had to use crutches. The pain continued to grow rap-

idly worse until he was confined to the house. After he ceased making any use of the foot and gave it complete rest, it grew better, and in a few weeks he was so much improved as to be able to put on a boot and "attend dances." The foot continued free from pain until about five weeks ago, when it returned in the instep, and again became so badly swollen that he had to use crutches.

Present Condition.—Left foot very much swollen, and tender on pressure. It is the seat of constant pain. Pulling on the foot to separate the joint surfaces does not cause additional suffering, but when the bones of the foot are pressed together the pain is very severe. The skin over the arch of the foot is tense, smooth, and shining. No fluctuation present.

February 16: Examined before the class by Professor Maclean. Diagnosis—Chronic inflammation of the tarsal joints.

Remarks.—There is some doubt as to the true condition of the structures, but from the character of the pain and the general history of the case, the strong alterative effect of the cautery will give relief and possibly stop the course of the disease.

If caries of the bones does not exist, the cauterization will soon be followed by a marked improvement. But if the bones are necrosed it will tend to increase the suppurative process.

Treatment.—Gave anæsthetic, and thoroughly applied the actual cautery. Amount of chloroform used, two drachms.

March 3: For a period after cauterization the pain was much diminished, but upon his return on this date the foot was painful, and for the past few days he suffered quite severe pain. Tho tissues are suppurating with a free discharge of healthy pus. The tarsal bones feel rough. Dressings applied to the sore produced by the cauterization.

March 10: Burn healing rapidly. Discharges healthy and gradually diminishing.

March 29: Patient's general health much improved. Discharge continues, not much lessened in quantity.

March 21: Discharge about the same in quantity and character. Anæsthetic given, the opening enlarged, and bones of foot examined. The periosteum thickened and rough, but bones seem to be recovering their vitality. Wound to be kept very clean and dressed with iodoform.

March 27: Large quantity of healthy pus discharging. General health of patient continues to improve.

April 5: Patient's health much improved. Discharge rapidly diminishing.

April 10: Wound healthy and discharge continues to decrease in quantity.

May 1: Patient continues to improve. Inflammatory thickening being rapidly absorbed.

May 26: Dismissed.

EDITORIAL PERISCOPE.

POISONING BY CANNED GOODS.

In a paper read before the New York Medico-Legal Society by Dr. J. C. Johnson (publication noticed in August number), the sources of danger from canned goods and practical measures for their detection were clearly pointed out. He had six cases of severe poisoning in one family from eating canned tomatoes. The symptoms came on two hours after the lunch; all were taken with burning pain in the stomach, intense thirst, dryness of the throat, retching and tenesmus. In two the contents of the stomach were thrown off, and their symptoms improved but two continued to grow worse, and on the fourth day Dr. Johnson was called in. The symptoms were now alarming, there was severe gastro-enteritis; the abdomen intensely tender; the tongue of a fiery red; the rectum prolapsed in the ineffectual efforts at stool; coma from which it was difficult to arouse the patients. In addition to these symptoms there was in one case an eruption over the whole body of a fiery red with intolerable itching. Stupor passed into complete coma, followed by severe and continuous epileptiform convulsions. The severe tenesmus and constipation passed off, followed with dark tarry motions, and finally bloody stools. The patients recovered ultimately after a long and anxious struggle. It was evident that this suffering could not have resulted from spoiled tomatoes, because then the symptoms would have been those of cholera morbus, vomiting, purging and cramps. The vertigo, coma, convulsions, and obstinate constipation are so many evidences of mineral poisoning. After a close study of the method of preparation and canning of tomatoes, which lead to an expert chemical examination, the poison was shown to be chloride of zinc and tin. It was noticed that the head of the can around the cap was corroded. It was then learned from a trained tinsmith that the cap was not fastened to the head of the can by a resin amalgam as the sides were, but that the amalgam was made of muriate of zinc. This is prepared by dissolving pieces of zinc in muriatic acid until a saturated solution is produced. In closing the cans this solution is painted into the groove, the cap then placed on and held with a clamp, and the soldering iron passed around, being heated to a great heat. The solder held in the acid, and if there happened to be too much acid applied, as the tin expanded with the heat, the surplus of acid would be forced into the can. Boys were employed to paint this amalgam on with a brush. Two qualities of tin are used, the one has large quantities of lead in its composition. This bad or "terne" tin is dark or dull in appearance, and is easily recognized from the good or "coke" tin known by its

bright silvery appearance. All the cans examined were found corroded around the tin top where the acid amalgam was applied.

Chloride of zinc is a powerful corrosive poison. Canners who have been interviewed, say that they know that muriate of zinc has got into cans that they have sealed. This fact and the danger of it is known in Maryland, that state having a law prohibiting the use of this muriate of zinc flux.

With reference to the "reprocessing" of decomposed and spoiled goods, which in trade language are known as "swells," Dr. Johnson describes a trick of unscrupulous dealers who buy such cans, and by heating and punching another hole in the lid the confined gas which has bulged the heads, escapes and the ends assume their concave form; but cans, thus treated have two holes in the lid instead of one.

From his conclusions the following practical suggestions are taken: Every cap should be examined, and if two holes are found in it, send the can at once to the Health Board, with the contents and name of the grocer who sold it. Reject every article of canned food that does not show the line of resin around the edge of the solder of the cap, the same as is seen on the seam at the side of the can. Reject every can that does not have the name of the manufacturer or firm upon it as well as the name of the company and the town where manufactured. Press up the bottom of the can, if decomposition is commencing the tin will rattle. Reject every can that shows any rust around the cap on the inside of the head of the can.

ADHERENT ULCERS.

In a clinical lecture delivered at the Manchester Royal Infirmary, Dr. Hardie called the attention of the class to an ulcer, which from its appearance could be justifiably diagnosed as "indolent," but which possessed peculiarities that would prevent it yielding to the treatment found successful in indolent ulcers. The base is the place wherein lies the greatest difference. The edges are elevated, irregular in outline, but not truly indurated. The surface is red, and not entirely destitute of granulations. The discharge is somewhat purulent. The base, however, feels tense to the finger, not simply hard and unyielding. It was this condition of the base that gave the ulcer its special interest. Dr. Hardie believed that it not only explained the arrest of the healing process, but gives a clue to successful treatment. Its hard, tense, and resistant character is not the normal condition of the tissues, but is significant of deposit of plastic lymph. This tells that it has once been the seat of an inflammatory process. The loose cellular tissue became infiltrated with plastic lymph. The depth to which this exudate extends varies, in some cases no deeper than the superficial

fascia, in others this will be destroyed and the exudation infiltrates to the deeper structures. This tissue undergoes changes, it becomes firm, more organized—in short, converted into dense cicatricial tissue, almost as dense and destitute of blood-vessels as cartilage.

We have knowledge of the fact that the ulcer is ultimately attached to an unyielding fibrous structure, beneath which the tissues are normal. This unaltered tissue if exposed will heal. The one object in the treatment will be to expose the healthy underlying tissue. This is no serious operation; no part of the ulcer need be excised. All that is necessary will be accomplished if several incisions are made through the firm tissue making the floor of the ulcer, letting them extend from the soft skin of one side to the same of the other side. The elasticity of the tissue divided, draws the edges of the incision apart, and large gaping wounds are formed. The soft tissue at the bottom of the incisions throws out granulations, which soon fill up the wounds. The edges of the incisions retract more and more, and bright healthy granulations continue to fill up the gap. The ulcer enlarges and at the end of a week the sore is twice its original size. The hard cicatricial tissue is now destroyed and a healthy healing sore has been established which now goes on healing with extraordinary rapidity. The healthy granulations insinuate themselves into the diseased tissue, cause it to be absorbed and removed. If the ulcer is one of great size, the healing processes can be greatly aided by skin grafting.

Two cuts making a crucial incision are usually sufficient, but as many as are necessary to perfectly liberate the parts are to be made. The knife must go completely through the hardened tissue, which Dr. Hardie describes as cutting like a raw potato.

It must be understood that this method of treatment is not recommended for all ulcers having indolent or callous characteristics, but for that form of ulcer which is denominated “adherent.” In the great majority of ulcers the ulcerative process has gone on for years, causing extensive loss of cutaneous and cellular tissue, forming a condition that is quite different from that in question.

THE TREATMENT OF HÆMOPTYSIS.

Although pulmonary hæmorrhage is of less moment as regards the danger of immediate death, than many other of the grave symptoms of phthisis, it is a complication that is most alarming to patient and friends. In the matter of treatment, the effects of the fright and subsequent mental disturbance which the patient experiences, are important factors which should not be neglected. This manifested anxiety is most sure to influence the physician to overlook the agitated state of the

patient's mind, and without further consideration, he immediately institutes some energetic course of treatment, based upon the most arbitrary principle or founded by the grossest empiricism. Remedies thus administered, generally result in doing no good, and not infrequently a great decree of harm. Administer a dose of ergotin or of the fluid extract of ergot, hyperdermatically. Assure the patient and his excited friends that it is an occurrence of greatest rarity for death to result from one of these attacks. Large doses of astringents have little or no effect on the pulmonary lesion, and through their effect on the howels they increase the arterial pressure and promote the bleeding. This will exclude in the treatment such medicines as gallic or any of the mineral acids; alum, although it is strongly recommended by many; acetate of lead, which is warmly advocated; chloride of sodium, a remedy employed by many from the fact, perhaps, that it is convenient. These with ipecacuanha, tartar emetic, and other drugs that have strong advocates as to their efficiency, have in the great majority of cases, gained their repute from the hæmorrhage stopping spontaneously. Although a multitude of drugs are recommended, and not a few almost regarded as specifics, it must be admitted that the profession has at command but a few preparations that have unquestioned influence to control pulmonary bleeding. Ergotine and the fluid extract of ergot have been mentioned; oil of turpentine given by mouth or rectum exhibits positive action in hæmoptysis of phthisis. But it cannot be too forcibly urged that the most important condition requiring treatment is the terror manifested by the patient, so alarming and distressing to the friends, which in turn tends to further alarm the patient. The administration of opium in some of its forms is clearly indicated, to calm the excited brain and reduce the throbbing heart. Give it hypodermatically that its physical effects are quickly produced. The result is magical. The patient's actions and countenance are speedily calmed, the bleeding stops, the much needed refreshing sleep is obtained, and the overestimated danger averted.

SEND US YOUR KNOWLEDGE ON THE SUBJECT.

"Yes, it is unquestionably true that the great increase in the sales of quinine during the last five years by retail druggists is very largely referable to what may be styled the quinine habit; and it is fully as frequent among women in society as it is with men whose nerves are overtaxed by hard work. And I may say to you, though many will dispute it, that of the two the quinine habit is more rapid in its ravages, when once thoroughly established, more difficult to break, and more dangerous in every respect than the habitual use of opium or its

preparations. Few, say practicing physicians, are aware of the tremendous potency of this drug in its effects upon the nervous system. As you know, depending upon the quantity taken, quinine possesses four very distinct properties, being, in very small doses, tonic and nervine; in moderate doses, directly stimulant; in large doses, sedative and soporific; in very large doses, intoxicating, producing a peculiar species of drunkenness, similar in its features to masked epilepsy, in which, while performing customary actions, and talking with the coherence of a person in full possession of his senses, the victim is really perfectly unconscious of what he is doing and totally irresponsible. There is no question that the regular use of the drug as a stimulant is rapidly increasing among the higher classes, and the fact is one of the most lamentable that has come under my notice for years. The way a man gets into it in the first place is very simple. He feels a little unstrung and out of tune, perhaps, and so consults the family physician, who suggests a few doses of quinine. In a day or two he feels singularly improved; his brain is clearer and bright; his physical energies seem to have renewed their youth. Elated with the result, whenever he feels down spirited or out of sorts, he resorts, of course, to the remedy that has once served his purpose so well, and very soon has acquired the habit of using the drug in regular daily doses. In three months, so insidious are its effects, the quinine habit is fully established, and the probability is that the man (or woman, as the case may be) has not five years to live.

"Worse still, so peculiar are the effects of the salt on the nervous system, there is a strong probability that the victim will die of suicide, for it is a singular fact that no toxic in the *materia medica* acts so directly and rapidly to produce suicidal predisposition and impulse. Morphia has no such effect, deplorable as its ravages are. The morphia habit generally transforms the most truthful man or woman into the most inveterate liar in the course of two or three years—a romancer of the wildest type. On the other hand, while quinine produces no perceptible effect on the veracity, it leads to a nervous irritability that is intolerable alike to its victim and his associates, and frequently ends in the sudden development of suicidal mania. Again, a patient may be reduced to the verge of the grave by morphia, and still recover a remnant of physical and nervous energy when the drug has been eliminated from the system; but when once the system gives way under the cumulative influence of quinine, the break-down is irrevocable. In the course of an experience embracing thirty-five cases of the quinine habit in its later stages, during the last two years, I have never seen a case in which the victim was good for anything after the habit was broken, and, as a rule, the patient collapses and dies if the withdrawal of the stimulant is perse-

vered in. Knowing these facts, I cannot tell you how I dread to prescribe quinine to men a little fagged out with overwork, and I think it is time that medical practitioners began to be as cautious with it as they are with morphia."

The above paragraphs are taken from an article that is being widely circulated by the medical as well as the secular press. It is not questioned that the use of quinine as a stimulant is fast becoming a very common habit among overworked business men, and worn out ladies of society. But the ravages of a long continuous use of the drug as pictured by "a distinguished medical practitioner, who has grown grey in his profession," suggests, that while this picture is undoubtedly highly colored, it might be well to make inquiry what effects, if any, have been noticed from the habitual use of quinine. In order to get the expression of as large a number as possible, we call upon our readers to make inquiry and investigation in their respective practices, and send a report, with such knowledge and opinions which they possess on the action and effect of the drug, when habitually used.

THE EARTH OUR LAST RESTING PLACE.

Next to Italy the United States favors cremation more than any other country. Scientists have stated their arguments in its favor. The request of the late Dr. Gross, that his body be burned, shows how honest must have been his convictions on the subject. But it must become much more common before the public mind will sanction the procedure. Setting aside the opposition which it meets from the expressed popular sentiment, it cannot become, within a reasonable period, an ordinary method of disposing of the dead, from the fact that many eminent sanitarians and men prominent in the medical profession do not regard it necessary.

In a recent article on the subject, the *Lancet* of June stated reasons for preferring "earth to fire as the means of dissolution of the dead body." They were these: that burning is unnecessary, because burial can do the same work as safely and effectually, and with less offence to custom, and because for various reasons it is not possible that it should ever be entirely superseded or even probable that it should cease to prevail over cremation.

It is claimed that cremation destroys the infectiousness of disease after death. But a deep and proper burial is a perfect safe-guard against the propagation of disease. There is little to be feared after a body is once buried, but it is the period between death and the interment that this danger is to be guarded against. At this time cremation has no advantage over burial. It is not the mode of disposing finally of the body, but the proper accommodations for its immediate storage,

that is at fault. It is the poor and not the rich family that is most liable to suffer. In the crowded tenements of large cities no apartment can be given up to the dead. The family must live in the room in which the corpse is kept.

A proper burial furnishes no arguments in favor of cremation, but there are measures connected with the rite that are most objectionable. The storage of bodies in private vaults, which are frequently visited; or worse, cording them up in the public vaults of the cemetery, which are constantly being entered by the numerous visitors; embalming the bodies, using metallic casks, superficial graves, or graves overcrowded, shallow soil, and like unsanitary measures and conditions are the objectionable practices that are justly criticised. The casket should be no more durable than the strength necessary to insure safe transportation and handling. Every means and precaution should be used to secure the most rapid dissolution of the body. A deep burial in dry soil is ample security against the production of noxious gases. If interments are conducted, and if burial sites are selected under the directions of an unbiased judgment, educated in sound sanitary knowledge, that practice which has so well served the rich and the poor, from which all classes are most benefitted, and which is most agreeable to the general public, will continue to be observed, and the long train of relatives and friends will, for the future as in the past, follow that which is corruptable, and see it consigned to its final resting place.

A MODE OF IDENTIFYING THE ENDS OF A PIECE OF SMALL INTESTINE.

It is confessedly difficult, writes Dr. Rand (*Lancet*), to determine the course, as between duodenum and cæcum of any portion of the small bowel which may present when an opening is made into the abdominal cavity; as, for example, in a section made for the relief of intestinal obstruction. Operators have ere this passed feet of intestine through their hands, uncertain as to whether they were proceeding upwards or downwards in the direction of the length of the tube. In those cases where an opening is made into the abdominal cavity sufficiently large to admit the hand, the mesentery may be taken as a sure clue, if the attachment of its root be borne in mind. The attachment, it will be remembered, was along in front of the spinal column in an oblique line from the left side of the second lumbar vertebra to the right sacro-iliac synchondrosis; it corresponds roughly with the long axis of the trunk. Above, it comes into relation with the upper end of the small intestine at the commencement of the jejunum; below, it leaves it at the cæcum. At the spine the two surfaces of the mesentery face laterally right and left;

further out their arrangement like that of the bowel, is constantly varying. As we may speak of a right and of a left surface as regards the mesentery, so may we, none the less, as regards the bowel. It is difficult to identify the right and left sides of the bowel, but those of the mesentery are, at its root, self-evident, for here it occupies but some six inches in extent of length, whilst at its periphery it veins in some nineteen feet or so of tube.

The right and left sides of the bowel having been identified, a knowledge of the proximal and distal ends follows in necessary sequence. The peritoneal cavity having been opened at any point in the anterior abdominal wall, the first piece of small bowel presenting may be seized; its long axis being held in the long axis of the body, and its attached mesentery being pulled out taut from the spine, the hand may be passed, guided by the mesentery, backwards to the spine, when it may be passed, guided by the mesentery, backwards to the spine, when it may be passed upwards and downwards without hindrance along its spinal attachment. If the bowel is being held in its true direction, the hand passed to the right of it will be conducted by the mesentery, to the right side of the spinal column, and passed to the left of it, it will be conducted to the left side; but should the apparently upper end of the bowel be not really so, the hand, in passing to its right side, will be conducted by the mesentery over to the left side of the spine, and conversely, if passed to its left side will be conducted; in either case the hand being passed upwards and downwards to identify the mesenteric root. Nothing can be simpler in practice, as may be found by making trial and test in the postmortem room I have no doubt this method has been used in the past, but having found no record of it, have thought it worthy of mention.

PROTRACTED LETHARGY PRODUCED BY LARGE DOSES OF BROMIDE OF SODIUM.

Dr. E. G. Cutler reports, in the *Boston Medical and Surgical Journal*, the case of a man, who in carrying out a "cure" for the morphia habit, took according to the directions, sixty grams of the soda salt three times a day for the first day, increasing the dose ten grams for each preceding day until one hundred and twenty grams are taken twice a day. The cure was to be complete when this was finished. This course was followed for the prescribed time, on the last day of which, he could hardly be made to take the doses. In four days his lethargy was complete; no reflex action of any kind could be excited; nothing could be swallowed; respiration was slow and shallow; temperature slightly subnormal; urine was secreted (but not voided) at the rate of about one ounce a day. The treatment comprised:—enemata of milk, beef tea, with small

doses of alcohol, of strychnia, and of nitre, and general faradization. On the fifteenth day the conjunctiva was found to be sensitive to touch; on the seventeenth he could be made to swallow, but only slowly, and after much persuasion; on the twentieth day he began to awaken, and urine was, for the first time, voided without the aid of the catheter. The power of movement returned in the legs before the arms, and such complicated movements as feeding himself, buttoning his collar and the like, could not be performed for more than a fortnight after he had become thoroughly awake. No cutaneous eruption was observed. The patient was temporarily broken of his morphia craving, but ultimately resumed the habit. Similar cases, in one of which two, and a half ounces of the bromide were taken, and one which ended fatally, were referred to.

LAWs REGULATING THE PRACTICE OF MEDICINE.

When a new law is passed it is always a matter of interest to know how it will stand litigation. The laws enacted by the legislatures of various states, regulating the practice of medicine by giving the licensing power to specially appointed boards of license, or to the state boards of health, have by many been thought to be impracticable, and that any suits that might arise against their enforcement would be sustained by the courts. The following letter plainly shows the strength and support of the law, which the board of health are so faithfully and courageously enforcing in the state of Illinois:

"EDITOR LOUISVILLE MEDICAL NEWS: Recent decisions in two cases, one under the 'Act to Regulate the Practice of Medicine in Illinois,' the other under the 'Dental Surgery Act,' sustain the right of the state board of health to determine the status both of a college and of a practitioner.

"Under the latter act the supreme court refused the petition of Isaac N. Sheppard, for a writ of mandamus to compel the state board of dental examiners to issue him a certificate or license based upon a diploma of the Indiana Dental College.

"The board refused the license on the ground that the college was not a reputable institution. It was argued that the law constitutes the board judges of the standing of a college, and there is no power of review vested in any other body.

"If the board should arbitrarily or unreasonably abuse their discretion, and refuse a license without any reason therefor, there is a remedy for such abuse of a discretionary power. But there was no ground for claiming that this was the case in the present instance.

"The board, in its judgment, had decided that the curriculum of study and requirements for graduation of the Indiana Dental College were not such as to entitle it to be classed as 'a reputable dental college;' and there is no power in the law

given to any person or body to review and set aside, or confirm, the exercise of the discretion by the board!"

The petition for a mandamus was denied.

In the case of the state board of health against C. Buel Rice, of Cincinnati, a graduate of the Medical College of Fort Wayne, tried in the Sangamon county court, the defense set up the plea, that being a graduate of a legally chartered medical institution in good standing the defendant was entitled to the certificate of the board, and that it was not competent for the board to enquire into the moral or professional character of such graduates.

On the part of the prosecution it was shown that charges had been presented to the board alleging that Rice was in the employ of, and associated with, the "K. & K. surgeons," a firm of advertising quacks from Cincinnati and elsewhere, and that, in various ways connected therewith, his conduct was unprofessional and dishonorable within the meaning and intent of the "Medical Practice Act." Upon these charges the board had refused to issue Rice a certificate until he had disproved the same. Instead of making any attempt at such disproof, Rice continued to practice, whereupon he was arrested for practicing without the necessary certificate.

The facts were admitted by the defense, but, as already stated, the court was asked to dismiss the suit on the ground that it was obligatory on the board, to issue its certificate to the possessor of a genuine diploma of any legally chartered medical institution in good standing, regardless of the moral or professional status of the individual. This the court declined to do, but found the defendant guilty, and assessed a penalty of fifty dollars fine, and costs.

CONDENSATIONS.

THE French minister of public instruction, has informed M. Pasteur that the state has offered him a piece of land in the Bois de Boulogne, in order to facilitate his experiments on rabies.

THE dry method of sewage disposal as practiced in Canton, is worthy the consideration of health officers of our small cities, where wet sewage is not used. Canton, with a population of one million and a half, densely packed together in narrow streets, is, considering its imperfect and dirty drains, a very healthy city. This healthful condition is credited to the daily careful collection of garbage, which is taken out of the city and used as fertilizer.

Two cases of successful removal of hair tumors by gastrotomy have been recently reported. One by Mr. Knowsley Thornton, England, mentioned in the *British Medical Journal* of

May 10, 1884. The other reported by Schönborn in the *Centralblatt für die Medicinischen Wissenschaften*. The latter case was a girl aged fifteen. She had suffered for two years from severe pain in the epigastrium. A movable tumor was found toward the right of the abdomen, which was taken for a floating kidney, the removal of which was attempted. At the operation the tumor was found within the stomach, this organ being displaced downwards. The stomach was opened and the tumor removed. The mass weighed nine ounces and consisted of small pieces of hair matted together: the hair was black on the surface but lighter in the middle. The patient recovered perfectly in three weeks, being relieved of all her gastric symptoms. The girl was a hypnotic subject, and it was learned from her own statement, that about four years previously she had taken to the habit of chewing the ends of the long plait into which her hair was collected, keeping up the habit for a year. Schönborn has collected seven similar cases from the literature of the subject, all of which ended fatally, either from uncontrolled vomiting or from perforative peritonitis.

GENERAL GORDON'S GREAT PHYSICAL ENDURANCE.—General Gordon, who is again brought prominently before the reading world, is, in more than his military distinction, a wonderful man. "His life," says the *Lancet*, "is as great a mystery as his character. His physical endurance in the desert would be difficult to understand in a strong man; but in a man with angina pectoris, and with a horror of meals, it is simply a kind of miracle." As far back as November 15, 1878, and in that very Khartoum on which the eyes of all christian nations are turned, he writes: "There are not nine Europeans in the Soudan, and they vegetate and do not live. Can you conceive what it is never to have a desire to eat? That is my case. I hate the operation. . . . My angina pectoris has not troubled me lately. According to medical books it is not known what occasions this. It is heart disease, and makes you think you are on the brink of death. A rush of blood takes place to the heart, and you think all is over. I may say I have died suddenly over a hundred times." We can find only encouragement in such facts to go on hoping that against all human and medical probabilities, Gordon will again emerge from the Soudan, and long continue to show the world what can be done by men with grave disease, but with faith in their own mission and in God's providence.

AN account of an easy method for sounding for impacted gall-stones was read at a May meeting of the Royal Medical and Chirurgical Society, by Dr. George Harley. The procedure was successfully performed, and consisted in passing a six-inch long French exploring trocar midway between the umbilicus

and margin of the liver, an inch and a half to the right of the median. The instrument could be moved freely in all directions, and was removed. It was then re-entered an inch higher up and two inches from the median line. On pushing it upwards and backwards to the depth of six inches, its point struck against a hard substance. By moving the instrument in various directions the size of the stone was estimated to be about that of a hazel-nut. The signs of obstruction rapidly disappeared, but the period of convalescence was short. The patient was attacked with enteritis, followed by peritonitis, and succumbed twenty-four days after the stone had evidently left the duct. The autopsy revealed thirteen calculi still remaining in the gall-bladder. Concerning the operation and its benefits, the author made the following conclusions: (1) That the presence of an impacted gall-stone may be readily, as well as safely, ascertained in the way described; (2) That not only the position, but even the size and shape, of an impacted calculus, may be instrumentally ascertained; (3) That the knowledge of these facts may possibly induce surgeons to undertake earlier than heretofore an artificial removal of dangerously impacted gall-stones. He believes that the fatality of this operation has been due to it being delayed until the patient is so exhausted as to be beyond the possibility of recovery.

In a memoir addressed to the Académie des Sciences, Dr. Boncheron, on the pseudo-meningitis of the deaf and dumb, asserts that the difficulty in walking, nervous fits, and violent attacks of anger, exhibited by the deaf and dumb, are not due to cerebro-spinal meningitis or to primary inflammation of the labyrinthine cavity of the ear, as previously supposed, but to overstimulation of the nerves of the labyrinth. After propelling air through the Eustachian tube into the middle ear of young deaf and dumb patients, the symptoms above enumerated disappeared.

The Eustachian tube becomes obliterated, after the aural catarrh following measles, scarlet or typhoid fever. The tympanum is empty, the atmospheric pressure forces the membrane inward, and pushes back the vesicles into the labyrinth. The fluid which fills the labyrinthine cavity thus pressed against, communicates the pressure to the nerve terminations. Dr. Boncheron claims that this unresisted external pressure is the origin of many morbid conditions. If the nerves of the semi-circular canal be pressed upon, the patient can neither stand, walk nor hold up his head. Pressure upon the auditory nerves provokes buzzing and deafness. If the nerves of the ear be pressed on the impression is transmitted to the pneumogastric, spinal accessory, the third, fourth, fifth, sixth, and seventh cranial nerves, the cervical, brachial, thoracic, dorsal and lumbar spinal nerves. The results are nausea and vomiting; the

head is thrown backwards; there are facial contortions, and grinding of the teeth, with spasmodic movements of the eyelids and arms.

It is a clinical fact well known to all physicians and surgeons who have had any considerable number of sprains and dislocations to treat, that the former injury is much more liable to be followed by long and severe synovitis. The joint loses its natural form and becomes swollen and even. The swelling is hard and tense, and if fluctuation cannot be easily felt and recognized, there is no doubt in the mind of the surgeon as to its being the cause of the swelling. It is the natural result of an accumulation of fluid in the synovial cavity. The secretion of fluid has been sufficient to produce an internal pressure capable of forcibly distending the capsule and bulging the surrounding soft structures. The firm inelastic tissue forming the capsule can resist a great force before it will yield or tear. This accounts for the extreme tension of the joint and the accompanying severe pain. But dislocation is followed by no such results. The injury is much more severe. The joint structures are not merely strained but are torn and lacerated. This solution of continuity of the synovial membrane must of necessity produce a greater or less degree of inflammation. In this rupture of the capsule is found the agent which prevents the swelling. The excessive secretion of a strained joint is confined within the membrane, while in dislocation it is allowed to drain away into the tissues of the limb. Here is plainly indicated the treatment for acute synovitis whether it be traumatic or idiopathic. Provide means for the escape of the accumulated fluid and the evil results of sero-synovitis are avoided. Let the joint be enveloped with an elastic bandage firmly applied, but in such manner as to leave exposed a small surface where the structures surrounding the joint are the thinnest and least resisting. A fine aspiratory needle thrust into the joint at this place will allow the escape of the confined fluid. When the joint cavity is emptied, withdraw the needle and put up the joint in antiseptic dressing.

NEW PUBLICATIONS.

URINARY TEST PAPERS: INSTRUCTION FOR BEDSIDE URINALYSIS; with reprint from the *Lancet* of an article on "Bedside Urinary Tests," by Dr. George Oliver, and reprint of an article by Dr. Charles W. Purdy, in *Journal of American Medical Association*. Detroit and New York, 1884: Parke, Davis & Co.

This pamphlet contains descriptions for making convenient and competent urine analyses at the bedside by means of urinary test papers. The various reagents employed in the examination of the urine are in the form of impregnated filtering-

paper, which are put up by this firm in their "Vest Pocket Laboratory for the Physician." This pocket case enables the physician to carry with him a complete set of apparatus and reagents for making all the qualitative and quantitative tests ordinarily required in examination of the urine for clinical purposes. The series of urine test papers which it contains, include: (1) Litmus paper (neutral shade); (2) Reagents for sugar—(a) picric acid, (b) indigo carmine; (3) Tests for albumen—(a) potassio-mercuric iodide, (b) sodium tungstate, (c) picric acid, (d) potassium ferrocyanide; (4) Reagents used in connection with the above—(a) in connection with sugar tests, sodium carborate, (b) in connection with the albumen tests, citric acid. The accuracy of these papers have been unquestionably proven. The information which they furnish is as reliable, and more precise and varied in character than that afforded by the more familiar tests.

The apparatus consists of—(1) Two test-tubes, one graduated; (2) A graduated minim pipette; (3) A set of six specific gravity beads. These beads have the advantage over the ordinary urinometer that they may be carried in the pocket without danger of breaking. The graduated apparatus enables physicians to make quantitative as well as qualitative tests.

The case contains a little manual, of complete instructions for the use of the test papers, and contains Vogel's scale of colors. Price of case—paper, \$1.00; leather, \$1.50. Parke, Davis & Co., Detroit, Michigan.

AUSCULTATION, PERCUSSION AND URINALYSIS: EPITOME OF THE PHYSICAL SIGNS OF THE DISEASES OF THE HEART, LUNGS, LIVER AND KIDNEYS. Edited by C. Henri Leonard, M. A., M. D., Professor of Medical and Surgical Diseases of Women, and Clinical Gynecology, Michigan College of Medicine. Fully illustrated; cloth; 16 mo; 166 pages. Post-paid \$1.00 Detroit, 1884. The *Illustrated Medical Journal* Co., Publishers.

The statement of the author, that "there has been a demand for a work on physical diagnosis for the use of students, *where the main points are briefly and plainly expressed*," may be correct, but the demand for these short tabulated, compilations has been created by the dangerous disposition of students to slip through their examinations with the least possible reading and study. There is a growing tendency in students and young physicians to want to carry their library around in their coat-tail pockets. The publication of these "vest pocket" editions only increases the facilities for gratifying these dissipated habits of study. Such works encourage indifferent and superficial work. This last little work of Dr. Leonard's is carefully compiled, and if properly used as a book of review while reading comprehensive works on the subject, the labor of the author will accomplish the good intended.

MEDICAL DIGEST.

ABORTION: ITS CAUSES AND FREQUENCY.

Professor Gaillard Thomas, in a lecture recently delivered at the New York College of Physicians and Surgeons, drew attention to the fact, that among the nineteenth century women there are two classes; the distinction between them has probably existed for many previous centuries, but to the exigencies of modern civilization seems to be owing its present broad and well-marked outlines. The one class, we are told, comprises those women who desire, above all things to become pregnant and to bear children; and the other, those who are anxious, above all, not to bear children. With the latter class the lecturer does not further concern himself as regards the former, he points out that their disappointment is, in many cases, due to a habit of aborting; and further, that about eighty per cent. of miscarriages take place at the end of the third month of utero-gestation. Two factors account for such an occurrence. Firstly, it is at this period of intra-uterine life that the placenta is becoming completely formed, while the chorion is disappearing; and this period of change in the method of foetal nutrition from the chorionic—in which the blood is derived from the whole intra-uterine surface—to the placental—in which the blood is drawn, from only a limited portion of the uterine wall—is a critical one, fraught with liability to dangerous complications. Secondly, it is at the end of the third month that the pregnant uterus begins to rise above the pelvic brim; and if its supports be weak so that the organ suffers something of a flexion or a version, the nutrition of the foetus may be thereby deranged, and the further continuance of utero-gestation imperilled.

Putting aside various possible causes, such as slight, but irritable cervical lacerations, irritable granulations about the os uteri, extreme nervous conditions, etc., there are two great *causes* of habitual abortion. The first is stated to be a posterior displacement of the uterus, which interferes with the proper development of the organ. This may often be so slight as almost to escape detection in the non-pregnant state; but a careful digital examination, with the woman standing in the erect posture, will show the uterus to be lying a little posterior to the line of its normal axis; and a slight further deviation backwards, such as is apt to occur in the pregnant organ from its increased weight, is sufficient to induce miscarriage at the third month. As regards treatment, should a woman in this condition, who has previously aborted, again become pregnant, she should be carefully watched, and be examined every four or five days, or at the longest once a week. If by the end of

the second month the uterus is found bent further backward than at the end of the first month, the patient should be placed in the genu-pectoral position, the uterus gently pushed over into its proper place, and a pessary inserted to maintain it in position. Supported in this way the uterus is able to rise out of the pelvis as it enlarges, and pregnancy is, therefore, allowed to go on.

The other great cause of abortion at this period is, of course, syphilis. "The moment I see a woman who tells me that she aborts regularly at the end of the third month, I am so certain of the cause that I say to myself, that she has either a slight or great displacement of the uterus, or else there is syphilis in the family." "Syphilis," says Dr. Thomas, "certainly develops accidentally sometimes;" and he thinks it unwise of the physician to scout and disbelieve the statements as to the extraordinary and unusual methods by which the disease has been innocently contracted, which are occasionally put forward. As a case in point, he gives one instance which is ingenious, if not convincing. "I have known," he says, "of the case of a sewing woman in this city who became infected with a true Hunterian chancre, followed by a secondary eruption, apparently in the following way: she accidentally pricked herself in the breast with a pin which had, probably, retained upon it syphilitic virus from the hand of the woman in France who made it, and who had, doubtless just been dressing her chancre previously to sticking the pin on the paper to send to this country, where it was destined to infect her innocent sister." Charity, doubtless, may well be accorded a place in a clinical lecture, and something, perhaps may be said for that charity which—beginning (and staying) at home—makes an unknown foreigner the "doubtless" cause of the disaster, and which appears to credit every workwoman in France with "her" evidences of a loathsome and disreputable malady; but we cannot concur in the desirability of setting such a story before students as an example of the way in which a scientific physician gathers his evidence.—*Medical Times*.

RELATION BETWEEN OVULATION AND MENSTRUATION.

A recent number of the *Archiv. für Gynäkologie*, contains an account of an elaborate investigation by Professor Leopold, of Dresden, into the relation between ovulation and menstruation, as evidenced by the condition of the corpus luteum at different periods of the menstrual cycle.

The author criticises the cases upon which those observers who have advanced opinions on the subject have based them; and he reports a number of postmortem examinations in which the date of the last menstruation was known, and no disease was present of such a nature as to modify the genital functions.

From these cases, together with those previously published which stand the test of his criticism, he draws his own conclusions.

The question at issue is this: What is the relation in point of time between the ripening and bursting of a Graafian follicle and the formation of a corpus luteum, on the one hand; and the monthly hæmorrhage from the uterus, on the other? Does a Graafian follicle burst with each menstruation, and if so, when? Is it before, during, or after, the flow, or in the inter-menstrual period?

The cases examined evidence the following facts: Ripe follicles to all appearance about to burst, that is, prominent, thinned at the most projecting part, with a ring of vascularity surrounding the thinned part; and also recently ruptured follicles, have been seen at all periods of the menstrual cycle.

The bursting of the follicle does not seem to depend upon its size, for large and small have alike been seen showing the signs of impending rupture. A large and small follicle may exist side by side, and the small one burst first, its rupture being sometimes hastened by the pressure of the adjacent larger one. As observation thus shows that ova may be discharged at any period of the menstrual cycle, it follows that a healthy woman who menstruates may conceive at any time. Dr. Leopold finds also, that two or three follicles may ripen simultaneously, and burst at about the same time, or one, being separated from its neighbor only by a very thin septum, may burst into it. This, which our author believes has not been described before, offers one explanation of plural pregnancies. Further, he has observed appearances which show, that follicles may ripen, blood be effused into them, and yet no rupture take place, but the follicle retrogrades without bursting. Dalton has described examples of the same thing. Professor Leopold suggests that we have here a possible explanation of ovarian dysmenorrhœa.

Turning to the examination of the corpus luteum, our author summarizes the changes in it as follows: The first day we have simply the ruptured follicle filled with blood. About the third day it presents itself as a large cavity full of effused blood. By about the eighth day a thin border, with a bright colored interior, becomes more sharply defined. By the twelfth day the border has become thicker and thrown into folds. By the sixteenth day the color of the follicle is pale red, or yellowish. Towards the twentieth day the nucleus has considerably shrunk, the border is yellower, and has thrown out folds and strise towards the centre. From the twenty-fourth to the thirty-fifth day there is a pale nucleus with a bright yellow, closely folded capsule. But these descriptions are only true in a very general sense, because between different corpora lutea of the same date there are very wide differences, both as to size and color. The age of a corpus luteum, therefore, can be only,

approximately, not exactly, stated. There is a great difference however, between a "typical" and an "atypical" corpus luteum. The typical corpus luteum is that found by a follicle which bursts during the menstrual congestion; it is larger, more turgescient with blood, and retrogrades more slowly, than the atypical, that is, the remains of a follicle bursting in the intermenstrual period. Menstruation may take place without the bursting of a follicle, and therefore without the formation of a corpus luteum; and the typical corpus luteum may be produced without menstrual hæmorrhage, if the menstrual congestion be present. The menstrual congestion of the uterus, and therefore of the ovaries, precedes the flow by some time; its intensity is dependent on the condition of general health, and the state of the uterus, especially of its mucous membrane; and its rhythm is liable to be disturbed by many different causes.

The *role* of the uterus in menstruation is only a passive one; the relation of its periodic bleeding to ovulation may be compared to that of the hands on a clock face to the works within. In short, ovulation may take place without menstruation, and menstruation without ovulation; follicles may burst and ova be discharged at any time, but do so without preponderating frequency under the influence of the vascularity and tension due to the menstrual congestion.—*Medical Times*.

SUICIDE AND SLEEPLESSNESS.

The unnatural and "distressing" death of the Dean of Bangor, was the occasion of an article in the *Lancet*, which referred to the attending circumstances, as presenting "no novel features." The reverend gentleman possessed a strong and highly cultivated intellect, "which," continues the writer, "is the same thing as saying that he was constitutionally liable to intervals of mental depression." Individuals need not be, in this sense, unfortunately blessed with superior intelligence, to be cursed with attacks of despondency; there needs be only a high degree of emotional susceptibility. Nor will observation carry out the truth of the assertion that "all highly intellectual men are exposed to this evil." Men of truly strong mental faculties are predisposed against, rather than inclined toward, these attacks. But when the emotional and intellectual parts are equally strong, or when the emotional element is particularly acute and refined, do we find the truth of that statement verified. Strong brains do not tire. Great minds perform their labors with ease. But when an over-ambitious disposition lashes the mind to engage in tasks beyond its ability, and when these duties can only be executed by the utmost mental concentration and exertion, are the dangers of depression to be feared and guarded against. To these cases the following is peculiarly applicable:

"A pendulum will always swing just as far in one direction as it does in another. Great power of mind implies also great weakness under certain conditions. The marvel is not that great minds occasionally become deranged, but that they so often escape derangement. Sleeplessness means not merely unrest, but starvation of the cerebrum. The brain cannot recuperate, or, in other words, it cannot rest. Physiologically, recuperation and rest are the same thing. Sleep is simply physiological rest. The only cause for regret in these cases is that the blunder should ever be committed of supposing that a stupefying drug, which throws the brain into a condition that mimics and burlesques sleep, can do good. It is deceptive to give narcotics in a case of this type. The stupor simply masks the danger. Better far let the insomniac patient exhaust himself than stupefy him. Chloral, bromide, and the rest of the poisons that produce a semblance of sleep are so many snares in such cases. Sleeplessness is a malady of the most formidable character, but it is not to be treated by intoxicating the organ upon which the stress of the trouble falls. Suicide, which occurs at the very outset of derangement and is apt to appear a sane act, is the logical issue of failure of nutrition that results from want of sleep. It is curious to note how a sleepless patient will set to work with all the calmness and forethought of intelligent sanity to compass his death. He is not insane in any technical sense. He has no delusion. He does not act, or suppose himself to act, under an 'influence!' He simply wants to die, and, perhaps, not until after he has made an attempt to kill himself will he exhibit any of the formulated symptoms of mental disease."

QUININE SUBCUTANEOUSLY ADMINISTERED.

In a paper read before the Washtenaw County Medical Society, April 11, 1884, Dr. Kinne, of Ypsilanti, referred to an article which he had previously read to the society that contained these five propositions, and then proceeded with the instructive comments which follow:

First.—That the hypodermic method is preferable to any other, in case the use of quinine is requisite, in the disorders of infancy and childhood.

Second.—In all those cases where cinchonism must be produced promptly, the use of the needle is indispensable.

Third.—The hypodermic method is almost equally valuable in case the temperature is high and the patient comatose.

Fourth.—It is also preferable when the medicine is not tolerated by the stomach, and, especially, if it is rejected by the stomach and rectum both.

Fifth, and finally.—We should not forget its greater economy; as one-half less is required than when administered by

the mouth, and three-quarters less than when administered by the rectum.

Notwithstanding these great and very obvious advantages, however, the subcutaneous administration of quinine is not likely to become popular, unless some method can be pointed out by which the danger of producing a resultant abscess can be obviated, or, at least, greatly diminished. And this observation is especially true in the treatment of children and of the more adipose sex. For it must be familiar to every one, that, for a reason which it is the purpose of this paper to point out, the danger of producing a local trouble by the insertion of a hypodermic needle is far greater in these subjects than in others.

In the early part of our experience we got a scare—which has appeared in the sequel, however, not to have had a very substantial foundation. Nussbaum reported five cases, two of them in his own person, in which, by accident, an injection of morphine was thrown directly into a vein, and described in blood-curdling language the terrific effects produced. The picture was doubtless too highly colored, for Eulenberg, of Milan, had made many thousand insertions of the needle without this accident, and I have seen no report of a similar experience since. But it made a profound impression at the time, and in our search for a portion of the skin that could be punctured without the danger of penetrating a vein, the deltoid region was selected as being the best; and here we went on making our hypodermic injections, until our experience taught us to fear a vein less and an abscess more, and the deltoid region was abandoned as being a peculiarly unsafe one, having always in view the possibility of an abscess.

And an obvious inquiry is suggested by this bit of history. What is that peculiarity of the adipose tissue that renders it unsafe to make a hypodermic injection, unless it be a small one, in a child, in a female, or in the deltoid region in every case?

It is not the purpose of this paper to teach the ordinary principles of human histology, and, in addressing such a society as this, it cannot be necessary. The one feature which all these cases have in common is the density or closeness of the subcutaneous areolar tissue; or, in other words, the limited capacity of the areolar spaces. It is impossible to pass a needle through the skin without entering one of these areoles. And as they communicate with one another, it is quite possible, at least in theory, to inject an ordinary syringeful into this areolar network anywhere and in any case. And if the pressure of the thumb upon the top of the piston is very gentle and if the work is very slowly and very carefully done, a hypodermic injection can be made in any case without mechanical injury to the cellular tissues. But this is true only in theory.

Another well known principle enters into the problem here, which can never be safely overlooked or disregarded. Of the fibrous tissues that enter into the composition of the subcutaneous network, the collagenous element, the white fibrous tissue, greatly predominates. And the characteristics of this tissue are, that while it is perfectly flexible, it is not particularly strong, it is non-elastic and it is almost totally inextensible. And when it is remembered that the tearing force of a hypodermic injection is equal at every point to the whole pressure of the thumb upon the top of the piston, it will be readily seen how easy it must be to do an injury to the areolar substance, of which a local redness and tenderness and possibly an abscess may be the inevitable consequence.

The lesson to be derived from this will be readily seen. There are portions of the dermal surface where the skin applies more loosely, and where the areolar spaces will be found to have relatively a greater capacity. These loose spaces are to be carefully sought after and filled according to their capacity; but no force is to be applied to the top of the piston; time is to be taken, and the fingers of the other hand must carefully study the top of the rising prominence to guard against a dangerous degree of tension.

The weakness of the best solution of the sulphate of quinine that can be made must always constitute a strong objection to its hypodermic use. Dr. Bartholow's solution is made as follows:

" R. Quinine sulph.....	grs. 50.
Acidi sulph. dil.....	℥ 100.
Aquæ fontana.....	3 i.
Acidi carbol.....	℥ 5.

Sig. M. Solv.

This is probably the best solution of the sulphate of quinine that can be made. But an ordinary syringe of it contains only about three grains of the salt. It is too weak. In those desperate cases, where, in order to save life, we must have cinchonism within an hour's time, it will be necessary to refill the syringe from ten to fourteen times. And in an emergency we must not hesitate to do even this; but we can do better.

A very sanguine advocate of an acid solution of quinine, similar to this, reports having given "sixteen injections of thirty minims each (representing sixty grains of quinine), to one adult patient within twenty-four hours, with the very best results."

The writer reports further:

"I have used this solution hypodermically [sixteen years] with a large number of patients, varying from two to sixty years of age, and have never witnessed what could be considered *bad* results—the worst being a cold abscess containing a

few minims of pus. I do not remember to have seen this trifling and painless abscess in more than two or three cases. Upon being opened, these abscesses healed without trouble."

And this is a very good report; but we must respectfully submit that it is not, on the whole, satisfactory. We can do better.

A fluid ounce of a solution of the bimuriate of quinia and urea represents four hundred and eighty grains of quinia;* a fluid ounce of the best solution of quinine that can be made contains not more than fifty or sixty grains. The former solution is at least as unirritating as a solution of morphine; and the objections that this new salt is not ordinarily kept in the shops, and that it contains urea, are practically of no consequence. The druggist will keep on hand such things as are called for; and the adverse action of the urea has not been perceptible, even in the cases where the patient was already comatose. Take, for example, the following extract from Cressap McCoy's paper, already referred to:

"*Case XXIX.*—Insolatio comatose. Temperature, 105°; four injections, ten grains each, immediately; in one hour, temperature 104°; going down steadily after this; five hours after the injection, temperature 101°; in eighteen hours, normal; patient thoroughly cinchonized and rational three hours after administration; no other treatment adopted, excepting ice-bag to the head; no redness. Discharged cured."

There can be no abscess, as the consequence of a hypodermic injection, without the adverse concurrent action of these two causes. First, some little injury must have been done to the areolar tissue; and second, there must in some way have been an introduction of atmospheric germs. Considerable inflammation will be the consequence of a simple fracture, of course, but it will be of the adhesive kind. If, on the other hand, the fracture is a compound one, air will get into the wound, and not the air itself, but the germs which it carries, will produce a suppurative inflammation. A similar comparison can be made between an ordinary surgical wound (without antiseptic precautions) and a subcutaneous one. The needle should be scrupulously clean, then, and the water with which the solution is made should not be pure and clean merely, but absolutely free from atmospheric germs. The distilled water upon the shelf of the apothecary is clean and chemically pure, of course; but if it has not been just freshly distilled it will be liable to have attracted atmospheric impurities, and be therefore unfit for use. The same is true of cistern water and of water from melted ice. Fresh drinking water will usually answer our purpose, and the addition of carbolic acid will always be very proper in case the solution is to be kept on hand.

* *New York Medical Record*, August 7, 1880, page 154.

In a paper recently read before the Indiana State Medical Society, Dr. Yeakle states that many pharmacists, in a case of emergency, would not hesitate to use rain water, water from melted ice, or distilled water that has been exposed to the deleterious influences of the atmosphere, in dispensing a solution for hypodermic and other uses, and he relates several instances in which the repeated occurrence of abscess after injections led to the microscopic examination of the solution, and the detection of micro-organisms in active motion.

It may seem that a solution of quinine, made by adding sulphuric acid, must necessarily be aseptic, from the antiseptic action of the acid. But the redness and tumefaction that so frequently follow the insertion of the needle, and the necessity for adding carbolic acid to avoid an abscess, prove that this acid solution of quinine sulphate is not unirritating, and not destructive of atmospheric germs. A solution of the bimuriate of quinia with urea, on the other hand, does not change with keeping, and never produces an abscess in any case.

In the discussion that followed the reading of my first paper, a learned brother, not with us to-day, objected to the use of Drygin's salt (the bimuriatica carbomidata) that it contains urea, and cannot be used without danger of producing uræmic poisoning. But this objection, though an ingenious and plausible one, will not bear inspection; for, as already stated, the addition of the urea, while it renders the quinia salt more soluble and less irritating, does not appear to alter its therapeutic qualities in any way. And moreover, our experience in the use of this double salt has demonstrated another point of very great interest and importance, namely, that uræmic poisoning is not due to the chemical, urea, and must be attributed, therefore, to cadaveric salts of the body, the ptomaines, which are converted into urea to render them harmless and bring about their elimination.

In conclusion, then, of this desultory paper, we say this:

(1) A hypodermic injection of the bimuriate of quinia and urea is milder and safer than an ordinary injection of the sulphate of morphia, and even less care is requisite in its administration.

(2) But if, for any reason, this salt cannot be readily obtained, or is not at hand, let us have an acid solution of the sulphate as above described, or similar to it, and let the pharmacist be absolutely sure that the water used in making the solution is free from atmospheric germs.

(3) But by far the most important part of the operation is the selection of such areolar spaces as will contain the injection required, without laceration and without tension even. And these will be found not within the parenchyma of the cellular tissue, but through it and beneath it, between the cellular tissue, and the parts subjacent. I used to say, let us make our

injections small, and multiply them. But obviously, if we select ampler areolar spaces, the necessity for this will, in a great measure, be obviated.

I am indebted for this suggestion to Dr. N. S. Guice, of Fayette, Mississippi ("Transactions of Mississippi State Medical Association, 1883"). His language is as follows:

"I select a region where the inner surface of the subcutaneous areolar tissue is loosely adherent to the subjacent tissues, usually the dorsal surface of the forearm or the front and lateral regions of the thorax or abdomen. With the thumb and index finger of the left hand I elevate the skin and entire thickness of the areolar tissue. I then pass the needle of the syringe entirely through these structures, at a right angle to the direction of the fold, carrying the point beneath the inner surface of the areolar tissue, and depositing the solution in the loose, elastic tissue connecting the areolar with the subjacent tissues."

ON THE VIRUS OF RABIES.

M. Pasteur and his co-workers, MM. Chamberland and Roux, have completed a number of very interesting experiments on the pathology of rabies. This great investigator thinks that it is possible to banish hydrophobia from our midst. A new paper communicated by these gentlemen to the Paris Académie des Sciences, containing the facts which have been discovered concerning the virus, and an account of the repeated research on the pathology of hydrophobia, is literally translated (*Medical Times*) as follows:

The important fact that certain infective poisons vary in respect to their virulence, and that insusceptibility to a virus may be secured by means of another virus of less intensity, is at the present moment not only an abstract scientific discovery, but has found an application in the domain of practice. Research being once turned in this direction, it is easy to understand how great an interest attaches to investigation into the methods of attenuation appropriate to new viruses. I have the honor, on the present occasion, to bring under the notice of the Academy an advance in this direction, in reference to rabies.

(1) If the poison of rabies be transmitted from the dog to the monkey, and then from monkey to monkey, its virulence diminishes with each inoculation. If the virus which has been thus enfeebled by inoculation from monkey to monkey, be then retransmitted to a dog, a rabbit, or a guinea-pig, it still remains attenuated. In other words, the virulence never returns at once to the degree found in the mad dog of the streets.

(2) The virulence of the poison of rabies is increased when it is transmitted from rabbit to rabbit, or from guinea-pig to

guinea-pig. When the virulence has thus increased and reached its maximum in the rabbit, the virus still retains this high degree of virulence when transmitted to the dog, and is evidently much more intensely virulent than the virus of the mad dog of the streets. Under these conditions, indeed, the poison is so virulent, that when inoculated into the circulation of the dog fatal rabies is the invariable result.

(3) Although the virulence of the poison is intensified in its passage from rabbit to rabbit, and from guinea-pig to guinea-pig, it requires many successive inoculations before it recovers its maximum virulence, when it has been previously attenuated in the monkey. Further, the poison found in the mad dog of the streets, which, as I have just said, is far from being of maximum virulence, when it is inoculated in the rabbits before it attains the maximum.

If we apply rationally the results I have just communicated, we can easily render dogs proof against rabies. The investigator may have at his disposal the virus of rabies in different degrees of attenuation; the non-fatal kinds preserving the economy from the effects of the more active and fatal kinds. Let us take an example. We take the virus of rabies from a rabbit which has died after inoculation by triphining, at the end of a period of incubation, exceeding by several days the shortest period of incubation commonly met with in the rabbit. This period invariably occurs between the seventh and eighth day after inoculation by triphining with poison of maximum virulence. The virus from a rabbit, with the longest incubation period, is inoculated, again by triphining, in a second rabbit; the poison from this rabbit in a third. Each time the poison which is becoming less and less virulent, is communicated to a dog. The latter is at length found capable of resisting a poison of fatal virulence. It becomes, in fact, entirely proof against rabies, where the poison of the mad dog of the streets is introduced into its system, either by intravenous inoculation, or by triphining.

By inoculation with the blood of animals I have been able greatly to simplify the operation of vaccination, and to produce in the dog the most marked insusceptibility to this disease. I shall shortly communicate to the Academy the total result of what I have found in connection with this point.

It will be of considerable interest, both now and up to the distant epoch when rabies has become extinct as the result of vaccination, to be able to prevent the disease developing after bites by rabid dogs. On this point the first experiments that I have made give me the greatest hopes of success. Thanks to the length of the period of incubation of rabies when communicated by the bite of a rabid animal, I have reason to believe that we can with certainty produce a condition of insusceptibility in those who are bitten before the fatal malady is due.

The first results are very favorable to this view, but it will be necessary to repeat the experiments to an infinite extent on all manner of animals, before we shall have the courage to try this mode of prophylaxis against rabies.

The Academy will understand that, in spite of the confidence inspired by the numerous experiments I have made during the last four years, it is not without apprehension that I publish facts which point to nothing less than a possible prophylaxis against rabies. If I had had sufficient material at my disposal, I should have preferred to defer this communication until I had asked some of my colleagues at this Academy and at the Academy of Medicine to examine the conclusions I have just made known. In deference to these scruples and motives I took the liberty of writing a few days ago to M. Fallières, Minister of Public Instruction, asking him to be good enough to appoint a commission to whom I might submit the dogs which have been made proof against rabies. The crucial test which I would propose, would consist in the first place in taking from my kennels twenty dogs proof against rabies, and placing them side by side with twenty dogs intended to serve as my witnesses. We should then have these forty animals bitten successively by mad dogs. If the facts which I have enunciated are correct, the twenty dogs which I believe to be proof against the disease would all remain healthy, while the twenty witness dogs would become infected with rabies. In a second and not less conclusive experiment, we should take forty dogs—twenty vaccinated before the commission, and twenty not vaccinated. The forty dogs would then be inoculated by triphining with the virus of the mad dog of the streets. The twenty vaccinated dogs would be proof against the infection, while the other twenty would all die of rabies, with symptoms either of paralysis or madness.

THE SODIUM AND THE POTASSIUM BROMIDES AND IODIDES.

Dr. T. J. Hudson, in a paper on bromide and iodide of sodium (*Lancet*, December 22, 1883), sums up as follows their advantage over the bromide and iodide of potassium:

He first calls attention to the tendency of potash to produce anemia, digestive disturbance, and increased solid urinary constituents; also its depressing influence on the heart. Soda has none of these effects. It relieves dyspepsia, increases the water of the urine without affecting the solids, and has no effect upon the heart. For these reasons there is much less of reactive disturbance after large doses of the bromide of sodium than occurs after similar quantities of the bromide of potassium. The potash salt contains relatively more bromine, and the dose of the sodium compound should be larger in the proportion of about fourteen to twelve. In ordinary slight nervous-

ness, and in insomnia and the like, give the bromide of sodium to prevent the after-effects of the potash. In delirium tremens, give the bromide of sodium to prevent the after-effects of the potash on the heart. In cases of epilepsy the bromide of potassium seems to be more efficient, but where the treatment is kept up for a long time, substitute the bromide of sodium to avoid digestive disturbances and general sytemic depression. One hundred grains of the bromide of sodium may be given at a dose for any purpose without danger and without any unpleasant after-effects. Iodide of sodium was tried in syphilis, in large doses, but did not act so rapidly as iodide of potassium; it was, however, efficient, and was often substituted with advantage where patients were suffering from the effects of long continued iodide of potassium. In aneurism the iodide of sodium was much less efficient than the iodide of potassium, probably because it lacked the cardiac depressant effects of the latter. In whooping-cough the author found the bromide of potassium more efficient; this he explains by the supposition that the potash depresses the cerebrum.

INUNCTION AS A FEBRIFUGE.

Dr. P. Colrat, in a very interesting paper on modifications of temperature produced by general inunctions, especially in the febrile diseases of children (*Lyon. Méd.*, January 13, 1884), recalls the celebrated experiment of Fourcault, reported to the Academy of Sciences in 1853, in which he proved that the application of an impermeable varnish to the skin of an animal caused a fall of temperature, instead of causing it to rise, as would naturally be anticipated. Schlemann, of Hanover, was the first to apply the discovery to therapeutics, but limited it to the treatment of scarlatina; he believed that it diminished fever, quited the patient, prevented complications, and diminished the chances of contagion. The treatment was soon generally adopted, and although many did not believe that it had any general influence in preventing complications, it was on all sides found to lower the temperature and diminish irritability. The author of this paper has employed inunctions in a large number of cases, and has arrived at the conclusion that they are of use in all fibrile diseases, and that their use should not be limited to the eruptive fevers. He finds that the temperature begins to fall immediately after an inunction, and continues to fall for about an hour; it then remains stationary for about half an hour longer, when it commences to rise again. At the end of two hours it has reached the point where it stood before the inunction. The temperature again falls when a second or third inunction is performed, and may be kept down indefinitely by repeating them. The younger the child, the more marked the effect; the temperature may fall as much

as three or four degrees. General inunctions have been so freely practiced that it is quite evident that they are without danger, and one finds it difficult to explain the famous case of the child who was gilded to personate the "golden age" at the inauguration of Leo X, and who died in consequence. Senator proposes to explain this case as due to poisoning from the solution of gold employed in the gilding. The fall of temperature which follows inunction has been explained by Laskiewitsch and Lomikowski as due to increased loss of warmth by radiation. These experimenters proved that, if a limited portion of skin was covered with grease or varnished, a greater amount of heat was radiated from it than from an equal surface of bare skin. They further showed that, if animals were greased or varnished they soon died from depression of temperature, the blood in the veins being arterial from non-use of the oxygen contained in it, this last being due to arrest of oxidation and tissue metamorphosis by low temperature. They then prepared other animals in the same way, and showed that they could be kept alive by covering them with cotton wadding, or by putting them in a very warm room, or resorting to any means which prevented the increased loss of body-heat which followed the inunction.

According to these experimenters, adults are less affected by inunction than children, because they present less surface in comparison with their weight, and are less profoundly affected by measures which increase their heat radiation. Dogs and fur-clad animals die as a result of inunction, because they are naturally prevented by their coat from losing too much heat by radiation; when, therefore, the non-conducting properties of their coats are naturalized by the application of ointments or varnishes, the loss of warmth is increased so far beyond the normal that life cannot continue. The idea that their death under these circumstances is due to asphyxia, from suppression of cutaneous respiration is opposed by the fact that the appearances at postmortem are not all those of asphyxia, the blood containing even more oxygen than normal, and even the venous blood being bright red because the cooling tissues did not use the oxygen that was offered them, but allowed it to pass on into the veins, as it does in syncope.

MISCELLANEOUS ITEMS.

PROFESSOR KOCHER's method of preparing catgut for surgical purposes, consists of soaking ordinary gut in oil of juniper berries for two or three days, after which it is kept in absolute alcohol containing a small percentage of corrosive sublimate (one in five hundred), and of the juniper oil. Gut thus prepared is thoroughly antiseptic, of good strength, easily manipulated and not too soon absorbed.

IMMEDIATE APPLICATION OF THE SPLINT IN THE TREATMENT IN WHITLOW.—Dr. Illingworth writes that in the treatment of whitlow, not only is early and deep incision essential, but that it is necessary to place the finger at once on a back splint and to dress it frequently, so as to prevent all movement, and so favor healing, until the edges of the sheath of the tendons have properly united. By this means extensive suppuration is prevented and the cure is more rapid.—*Lancet*.

HYPODERMIC INJECTION OF IODIDE OF POTASSIUM.—M. Gilles de la Tourette confirms a statement previously published by M. Besnier to the effect that in rare cases in which the administration of iodide of potassium by the mouth cannot be tolerated, the medicine may be safely injected subcutaneously. A cubic centimeter of distilled water containing half a centigramme of the iodide may be injected, provided the solution is neutral. The injections should be made into a part rich in areolar tissue, and at points not too close to one another.—*Annales de Dermatologie et de Syphiligraphie*.

REMARKABLE OPIUM-EATERS.—Dr. J. C. Hoffman states in the *New York Medical Journal*, that a farmer in southern Illinois took in his presence the entire contents of a drachm vial of morphia, a dose which he repeated once or more daily. A railroad employe took from two and a half to three such doses daily. A physician whom he is now treating took forty-five grains *hypodermically pro die*. The doctor maintains that after the system has accustomed itself to a certain amount, which he thinks to be about ten grains, almost any additional quantity may be taken with impunity.

HOW TO PREPARE A SOLUTION OF CORROSIVE SUBLIMATE ONE TO ONE THOUSAND.—Sir Joseph Lister writes to the *British Medical Journal* that a drachm by weight of a solution of one part of corrosive sublimate in one and a half parts of glycerine contains two-fifths its weight or twenty-four grains of the sublimate. This multiplied by one thousand gives twenty-four thousand grains which is very nearly three pints. It is, however, much more convenient to use fluid measure than weight, and a fluid drachm of the glycerine solution referred to requires four pints of water to produce the one to one thousand solution.—*Medical News*.

TENOTOMY FOR PIANISTS.—The limited power of extension possessed by the ring finger is sometimes of great inconvenience, especially to pianists. In the case of a man in whom this condition was very marked, Dr. Forbes recently divided the cross fibres connecting the tendon of the extensor communis for the ring finger with those passing to the middle and little

fingers. The operation was almost painless and the wound healed quickly leaving an almost imperceptible scar. Before the operation the finger could be raised scarcely one-fourth of an inch, but after the tenotomy it could be extended one and one-fourth inches, and lost nothing of its strength in consequence.—*Wiener Med. Wochenschrift*.

THE MICROBE OF ERYSIPELAS.—In a lecture recently delivered at the Charité by Professor Hardy (*Gazette des Hôpitaux*) he observed that the contagiousness of erysipelas had been proved by the existence of microbes, demonstrated by Professor Bouchard. These were abundantly exhibited in the serosity of the phlyctenulæ in the cases now under consideration. These microbes bear a strong resemblance to those of puerperal fever, being of a very regular spherical figure and existing sometimes in an isolated condition, but at others attached to each other in a plain surface or arranged as chaplets or columns. In some instances they were surrounded by an envelope, which becoming ruptured left the microbe free.—*Medical Times*.

IODIDE OF SODIUM VERSUS IODIDE OF POTASSIUM.—In the *Archives of Medicine*, Dr. Berg makes a plea in favor of the iodide of sodium. Both from theoretical considerations and practical experience, he urges its substitution for the potassium salt, making the following claims for it: (1) It can be used therapeutically for almost all, certainly the chief, purposes for which the potassium salt is used, and, he believes, with similar beneficial effects; (2) It is more assimilable by the digestive organs locally and by the general system; (3) Many of the local and general undesirable effects produced by the potassium salt do not follow the use of sodium iodide. Dr. Berg therefore appeals to those having extensive opportunities to give it a fair trial.—*Medical Times*.

ALBUMINURIA AS A CONSEQUENCE OF CUTANEOUS EXCITEMENT.—Kemhadjian Nichran (*Thèse de Paris*, 1882) states that cutaneous excitement, by whatever means produced, may give rise to albuminuria. The amount of albumen, which in such a case can be almost at once detected, will vary according to the degree of excitement, the energy of the exciting agent, the extent of surface acted on, and the duration of the excitement. The duration of the albuminuria will also be determined by the same conditions; in most cases it is transient, but, under the influence of extreme peripheral irritation, it may persist, along with an alteration in the organic structure involved. Albuminuria, proceeding from cutaneous excitement, depends proximally on a disturbance of vaso-motor innervation.—*Journal of Cutaneous and Venereal Diseases*.

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ORIGINAL ARTICLES.

PROSTATIC HYPERTROPHY AND URINARY OBSTRUCTIONS: ITS TREATMENT WITHOUT CATHETERISM.*

BY A. B. PALMER, M. D., LL. D., ANN ARBOR, MICHIGAN.

The subject of enlargement of the prostate gland and the method of its management is of much interest to the profession, and in fact to every man who is approaching the period of the "grand climacteric," or who expects to reach advanced life.

Of late more than the usual attention has been given to this subject, especially in England, several articles having appeared in the journals discussing its pathology, and particularly the advantages and dangers of catheterism in its treatment.

The obstruction of the urethra and at the neck of the bladder, preventing the complete emptying of that viscus and its consequent irritation, inflammation, and hypertrophy, disease often extending to the kidneys, and the decomposition of the urine tending to the formation of calculi, the extreme suffering so often entailed, the uræmic poisoning which sometimes occurs, and a whole train of morbid processes, are familiar to all medical practitioners of much experience.

The means of preventing prostatic irritation and enlargement, and of reducing these conditions when they exist, are worthy of careful study; but all these means are more or less uncertain in their effects, and their consideration is not the sub-

*Delivered at the annual meeting of the Michigan State Medical Society, held at Grand Rapids, June 11 and 12, 1884.

ject of this paper. Its object is to call attention to the mechanical means of alleviating their consequences. It should be mentioned, however, that anything which will relieve the irritation of the bladder will tend to prevent irritation and further enlargement of the prostate.

The usual remedy recommended for preventing the severer consequences of this enlargement is the use of the catheter. The early and persevering use of this instrument, securing the daily complete evacuation of the bladder, so soon as that is not spontaneously accomplished, is advised; and Sir Benjamin Brodie, Sir Henry Thompson, and other authorities in this specialty, speak of the "catheter period" as one which is inevitable in the advanced life of many men. This signifies that when this period comes the catheter must ever after be the companion of the sufferer, and will be likely to be brought into daily or more frequent requisition.

With many persons this use of the catheter may be practiced with impunity, and in the absence of other methods, or in case of their failure, with great benefit. Indeed, in some cases the use of the catheter is essential to the saving of life. But those most strenuous in advising its early and habitual use admit its dangers—that it frequently produces more or less shock and irritation, and occasionally very severe and even fatal consequences.

Sir Andrew Clark, in a recent address as President of the Medical Society of London, has called especial attention to what he calls the "catheter fever," and I have lately seen several cases in the University Hospital where the introduction of the catheter has been followed by marked symptoms, and in two of the cases by quite severe effects.

Most of the cases of catheter irritation, or catheter fever, or urethral fever, or irritation, as variously called, though attended with marked depression and suffering, are comparatively mild, the symptoms subsiding in from one to a few days; but in other cases the symptoms are not only severe but protracted, or sometimes almost mysteriously result in speedy death, while in other cases the evidences and consequences of pyæmia are present.

This peculiar affection, which may follow either occasional or habitual catheterization, has been recognized by some members of the profession since the beginning of this century; but the severer forms were more fully and particularly described by Velpeau under the name of purulent urethritis, were admitted to occasionally occur by Civiale, were mentioned emphatically by Sir Benjamin Brodie, were described more in detail still in the different varieties by Marx, and later by Sir Henry Thompson, Sir Joseph Fayrer, and various other recent writers.

Sir Andrew Clark, in the address before referred to, stated that the late very acute and observing Mr. Syme, of Edinburgh,

recognized the danger to the nervous system from catheterism, and invariably gave a dose of opium to his patients when obliged to perform the operation, in order to avert, as far as possible, these irritating effects.

Catheterism is not only attended by these dangers, but to many the idea and practice are so exceedingly disagreeable that, with a knowledge of the consequences from its neglect, they will suffer most severely rather than submit to it. I have in my mind two eminent members of our profession in this country, one a very prominent surgeon far from being averse to surgical proceedings generally, both of whom were afflicted with enlarged prostate and associated diseases of the urinary organs, ultimately proving fatal, who persistently refused to allow the introduction of a catheter or sound, though strongly indicated, and urged by their professional advisers.

From these statements it is apparent that if any remedy exists or can be devised for relieving the obstruction to the free and complete evacuation of the bladder, and thus preventing all the distressing and dangerous consequences dependent upon such obstruction without resort to the catheter, it must be regarded as a boon to the *declining*, if not to the rising generation of men.

A very simple and, in at least a very large proportion of cases, a very effectual means for accomplishing this object is within our reach. It consists in dilatation of the urinary passage by a kind of *hydrostatic pressure*. This is effected in the following manner: The urethra is filled with urine as in an effort at micturition. The penis is then grasped between the thumb and fingers of the patient near the glans, and sufficient pressure is made upon the urethra to resist the flow, and then by straining, as in an attempt to forcibly empty the bladder, the distension of the urethra is produced. This distending pressure is gentle, steady, diffused, and painless, and may be applied and sustained at will, and in a majority of cases, if daily repeated for a time, and afterwards only occasionally, and if it is done thoroughly, and especially if commenced at an early period of obstruction, it will overcome this form of stricture effectually and without irritation and danger. It will in time, and generally soon, be followed by the power of more completely emptying the bladder, and with a fair, often a full stream.

This simple procedure commends itself to common sense, when mentioned, and it is a wonder that it has not been thought of and tried by those engaged in dealing with these cases.

However plausible this procedure appears on theoretical and simple mechanical principles, its claims to attention are not based on theory alone. Within my practice and observation it has stood the test of the experience of fifteen years.

Numerous cases could be given in illustration of its efficacy, but I will mention in detail only one as an example of many others.

In 1868 a man aged fifty-two was under my care and treatment, presenting the following history: He had an active but not physically laborious occupation, of temperate habits, and usually enjoyed good general health. His family history showed that he was the youngest of four brothers. His father, a temperate and otherwise healthy man, suffered for several years and up to the time of his death (which occurred at the age of fifty-six and when my patient was nine years old) with what the country people called the *gravel*. According to the account which had been handed down, he had great difficulty in passing water, with much distress, often with severe pain and straining, and always, in later life, in a small or dribbling stream, or in drops. He had repeated attacks, towards the last, of terrific pain in one side of the abdomen and groin, which was pronounced fits of gravel, doubtless renal colic, and these attacks were accompanied often by hæmaturia, and followed by discharges of gravelly material. After several years of suffering in this way he succumbed to an attack of what was probably acute cystitis, and perhaps pyelitis; and as he was in a comatose state for two or three days before death there was probably uræmic poisoning.

Two of the brothers of my patient suffered severely from enlargement of the prostate gland and its consequences, one dying, about the age of sixty, from inflammation of the bladder and kidneys, and on postmortem examination a calculus was found in the bladder. There was, therefore, a strong family disposition to this form of disease.

My patient, when about twenty-eight, had an attack of renal colic, and the next day passed by the urethra an angular calculus a little larger than a kernel of wheat, but its composition was not determined. From that period there was occasional irritability of the bladder, but no serious trouble occurred until about eight years later when he suffered from an attack of acute cystitis, the inflammation extending to the associated organs, involving particularly the prostate gland.

This illness continued several weeks, and ever after up to 1868, when he was placed under this special method of treatment, there had been gradually increasing obstruction to the passage of urine. The flow was always in a small stream, often broken and sometimes only in drops; it was accompanied with straining and often severe tenesmus, and the bladder was seldom, if at any time, completely emptied.

The "catheter period" had certainly fully arrived with him, and several practitioners previously consulted had strongly advised the use of the instrument.

For several years previous to this, indulgence in spices of any

kind, or even in a cup of coffee, or being exposed to cold, would increase the irritation, causing more frequent, more difficult, and more painful micturition. He felt that his condition had become serious and really dangerous, but his aversion to the use of the catheter had prevented his following the advice to commence it.

About this time I had seen in some medical journal a short paragraph suggesting the mode of distending the urethra described. I regret that I am unable to give credit to the author of the suggestion or to name the journal in which it was seen. It was read, as many other paragraphs are, without making a strong impression at the time; but on reflection the idea seemed so rational I determined to give the method a trial. The patient, in his anxiety for relief, readily assented to a trial, and carried out a faithful use of the means. It was practiced daily with speedy improvement, and though some irritability of the bladder continued, and its muscular coat was hypertrophied from previous excessive contractions in straining to micturate, the urine was in a few weeks passed in a fair stream and the bladder was apparently completely emptied.

This patient up to the present time, some sixteen years, has remained in comparative comfort, though the walls of the bladder are still hypertrophied, and its capacity is not as great as before the prostatic enlargement began. He commonly rests all night without urinating, and generally retains the urine for three or four hours at a time during the day. He sometimes has a sense of fullness in the region of the prostate, but is in the enjoyment of good health, and is more vigorous than most men at his period of life; and with great confidence he attributes his comfort, and even the saving of his life, to this simple device. Something is to be attributed to his avoidance of irritating ingesta, and to the rather free use of milk in his diet; but his difficulties came on under the same general habits of living, and his father and brothers were temperate men, very seldom indulging in any form of alcoholics; but the family tendency was so strong that their temperate habits did not protect them from the severest consequences of this painful affection. If this case stood alone, though so striking in itself as to seem to justify this full relation, or if there were but few others within my knowledge, the efficacy of this method of treatment as a substitute for catheterization might not be established in my own mind. But this, taken with many others, some in much more advanced stages, justifies, with me the most favorable conclusions as to its efficacy and value.

In one case in which I was consulted where there was failure to introduce the catheter, and where the bladder was repeatedly emptied through the abdominal walls by the aspirator, when after some exposure greater difficulties than usual came on, the patient under this treatment has gone on for some years in comparative comfort, passing his urine with tolerable freedom and

without such attacks of complete obstruction as he had before repeatedly experienced.

From what I regard as sufficient experience I feel the utmost confidence in commending this plan of management in obstruction from enlargement of the prostate gland to the profession, believing it will in very many cases prevent the necessity of catheterism with all its disagreeableness and dangers. Resorted to early, as soon as any difficulty is experienced in micturition, or as the stream becomes small or broken, it will usually prevent the consequences so common with old men, and save a great amount of suffering.

It is more than possible that the foregoing account of the efficacy of this simple method of treatment will be thought to be an exaggeration, and it may seem reasonable to suppose that, if capable of producing such results, it would have been long known and universally practiced; but no one has a right to deny its efficacy until he knows that the plan has been faithfully and perseveringly tried in numerous cases and has been found to fail. If it is half as efficacious as claimed, its importance will at once be appreciated, and no apology will be needed for the time occupied in the presentation of the subject.

GENERAL CORRESPONDENCE.

HEALTH IN MICHIGAN DURING AUGUST.

Reports to the State Board of Health, Lansing, by observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of August (four weeks ending August 30), 1884, as below:

For the month of August, 1884, the reports indicate that diarrhoea, cholera infantum, typho-malarial fever, cholera morbus, and dysentery increased in area of prevalence.

Compared with the month of August in the six years from 1877 to 1882, erysipelas, rheumatism, and bronchitis were more prevalent, and remittent fever, intermittent fever, dysentery, and cholera morbus, were less prevalent in August, 1884.

For the month of August, 1884, compared with the average of corresponding months for the six years from 1879 to 1884, the temperature was lower, the absolute, and the relative humidity, and the day ozone were less, and the night ozone more.

Including reports by regular observers and others diphtheria was reported in Michigan in the month of August, 1884, at twenty-seven places, namely, Alamo, Armada, Alpena, Au Sable, Bloomfield, Birmingham, Berlin, Detroit, East Saginaw, Flint, Grand Rapids, Groveland, Holly, Ishpeming, Kalamazoo, Leland, Maple Rapids, Manistee, Monroe, McBride, Northville, Oakland, Pontiac, South Haven, Summit, Vassar, and Warren:

scarlet fever at twenty places,—Albion, Au Sable, Armada, Bridgetown, Cadillac, Columbiaville, Clayton, Detroit, Dorr, Fairfield, Grand Rapids, Hastings, Hazleton, Ionia, Jasper, Kalamazoo, Novi, Stanton, Swartz Creek and Sand Beach; and Measles at ten places,—Detroit, Grand Rapids, Grand Haven, Kalkaska, Kalamazoo, Ludington, Manistee, Muskegon, South Haven, and Whitehall.

Number of Weekly Reports received, 205.		For preceding month.
Diseases arranged in order of greatest area of prevalence.	Per cent of reports stating presence of disease.	Per cent of reports stating presence of disease.
Diarrhoea	88	72
Intermittent fever.....	72	73
Rheumatism	68	68
Neuralgia.....	60	66
Consumption of lungs.....	60	63
Cholera morbus.....	50	39
Bronchitis	49	47
Dysentery.....	48	29
Remittent fever.....	44	45
Cholera infantum	42	27
Tonsillitis	35	34
Erysipelas	32	28
Influenza.....	30	28
Inflammation of bowels.....	26	20
Whooping-cough.....	23	27
Typho-malarial fever.....	22	10
Inflammation of the kidney.....	20	24
Diphtheria.....	14	8
Typhoid fever.....	12	7
Scarlet fever.....	11	11
Pneumonia.....	10	15
Inflammation of brain.....	10	9
Puerperal fever.....	9	7
Cerebro-spinal meningitis.....	8	6
Membranous croup.....	5	5
Measles	5	8

HENRY B. BAKER, Secretary.

LANSING, September 12, 1884.

HEALTH IN MICHIGAN DURING SEPTEMBER.

Reports to the State Board of Health, Lansing, by observers in different parts of the State, show the diseases which caused most sickness in Michigan during the month of September (four weeks ending September 27), 1884, as follows:

Number of weekly reports received, 184.		For preceding month.
Diseases arranged in order of greatest prevalence.	Per cent. of reports stating presence of disease.	Per cent. of reports stating presence of disease.
Intermittent fever.....	84	84
Diarrhœa.....	79	88
Consumption, of lungs.....	62	62
Rheumatism ..	61	61
Remittent fever.....	61	59
Neuralgia.....	58	57
Bronchitis.....	49	44
Dysentery.....	48	56
Cholera morbus.....	42	62
Typho-malarial fever.....	41	27
Cholera infantum.....	38	51
Tonsilitis.....	35	31
Influenza.....	28	24
Typhoid fever (enteric).....	22	15
Diphtheria.....	22	19
Whooping-cough.....	21	22
Erysipelas.....	19	22
Pneumonia.....	18	13
Inflammation of bowels.....	16	21
Scarlet fever	12	11
Inflammation of brain.....	7	8
Measles.....	6	10
Cerebro-spinal meningitis.....	6	5
Puerperal fever.....	5	6
Membranous croup.....	5	3

For the month of September, 1884, the reports indicate that typho-malarial fever and typhoid fever increased, and that cholera morbus, cholera infantum, diarrhœa, and dysentery decreased in prevalence, compared with August, 1884.

Compared with the average for the month of September in the six years from 1879 to 1884, intermittent fever, typho-malarial fever, diphtheria, pneumonia, and remittent fever, were less prevalent in September, 1884. There was no marked increase in the prevalence of any disease reported in the month of September, 1884, compared with the average for that month.

For the month of September, 1884, compared with the average of corresponding months for the six years from 1879 to 1884, the temperature was higher, the absolute humidity was more, and the relative humidity and the day and the night ozone less.

Including reports by regular observers and others diphtheria was reported in Michigan in the month of September, 1884, at twenty-five places, namely, Armada, Bloomfield, Detroit, Doug-

las, East Saginaw, Edmore, Fowlerville, Flint, Grand Rapids, Hastings, Handy, Ionia, Ishpeming, Ithaca, Kalamazoo, Marquette, Mendon, Muskegon, Port Huron, Prairie Ronde, Romeo, Sand Lake, South Haven, Vassar, Wyandotte; scarlet fever at seventeen places,—Cadillac, Detroit, Dorr, Dowagiac, Fairfield, Grand Rapids, Howard City, Ionia, Jerome, Kalamazoo, Monroe, Muir, Muskegon, Swartz Creek, Saint John, Vicksburg, Wexford. Measles at Detroit and Whitehall.

HENRY B. BAKER, Secretary.

LANSING, October 2, 1894.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY J. A. BOBB, ANN ARBOR, MICHIGAN.

A CASE OF ABDOMINAL TYPHUS FOLLOWED BY COXITIS.

BY DR. N. WORONICHIN, SAINT PETERSBURG, RUSSIA.

In the year 1883 I met in my private practice a case of coxitis which was developed immediately after abdominal typhus.

As this was the first case of coxitis following typhus I ever observed, I hoped to find in medical literature discussions on this subject, but in this I was disappointed. Of all the authorities I examined, I could not find any direct information concerning a similar case. The case is as follows:

A boy, eleven years and eight and one-half months old, of fair constitution and nourishment, had rachitis in early childhood; had no taint of scrofula; no alterations could be discovered in the lymph glands. In the year 1882 he had a light form of whooping-cough and chicken-pox. As he was the only son and very much petted by his parents, he was somewhat nervous, but otherwise well developed for his age.

On the 14th of March, 1883, he was taken sick with typhus. The sickness began as follows: After dinner which was served at 6 o'clock, he was taken with dizziness, severe palpitation, and this was followed by a chill. There was no vomiting. The next day the patient complained of headache, the tongue was somewhat dry, the skin dry and hot, the pulse 120. The lungs and heart were normal, but the spleen felt sore by pressure. A nervous restlessness gave the patient no chance to fall asleep, so that he counted the hours that intervened since the beginning of his headache, and in this way kept informed how long his head had been aching.

I decided from these symptoms that it was the beginning of abdominal typhus, and accordingly ordered a bath at temperature of from 30 to 32.5° centigrade, three times daily, dilute muriatic acid to be taken internally and milk as a diet.

The further continuance of the sickness fully confirmed the stated diagnosis. The sickness lasted three weeks and subsided without any complication. In respect to the course of the sickness the following is to be observed:

On the fifth day the spleen had been already so much enlarged that it extended to the seventh rib. On the seventh and eighth days the patient was delirious. During the first few days there was constipation, but on the sixth day he had seven watery defecations. The gurgling was evidently augmented in the ileo-coecal region. The headache, which greatly disquieted the patient, subsided on the fifth day. On the tenth day roseolæ appeared on the breast, abdomen and extremities. On the thirteenth day specimens of *ascaris lumbricoides* passed with the fæces. During the second week the defecations were not copious, but thin and flaky. On the fourteenth day the upper border of the spleen reached to the eighth rib. On the fifteenth the roseolæ were only visible after a bath, and on the seventeenth they had entirely disappeared. On the same day the defecations became thin and continued so for five days. Accordingly emulsion oil ricini followed by calomel, dose one-fourth grain was ordered three times daily.

At the end of three weeks the temperature became normal. During the entire sickness baths were given, and from the third day small doses (two grains) of chinin were ordered; this was given partly to keep up the strength of the patient. In respect to nourishment, milk and bouillon were given. Wine was also ordered. Toward the end of the third week when the temperature began to become normal, very strict attention was given to his nourishment.

His body temperature was the highest on the eighth day when it reached 40.8° centigrade; the pulse on that day was 134. On the following day at 11 A. M., the temperature had fallen to 38.3° centigrade; the pulse 126. The temperature was the lowest on the twenty-first day, when it was only 36.4° centigrade; the pulse 77. On the twenty-third day, his temperature was 37° centigrade; his pulse 96. On this day, as the fever was entirely subsided, the patient, with the greatest care possible, was allowed to leave his bed. He was clothed and lead from his bed to a sofa, where he spent the entire day. All danger seemed fortunately over; the patient complained of nothing. But on the following day when he again attempted to leave his bed, he felt a pain in his left leg. The patient pointed out the lower part of the thigh and knee as the seat of pain, yet it was impossible to tell exactly where the pain was located. As he was exceedingly nervous, the least movement of the leg caused him to scream violently. The legs were drawn up toward the pelvis. It is well to remark that during the entire fever the patient lay on his back and his legs were constantly drawn up to his abdomen, yet they were easily straightened

out. Toward the evening of this day (the twenty-fourth from the beginning of the sickness) the temperature rose to 38.8° centigrade. In connection with this the patient had no movement of the bowels for twenty-four hours. The spleen was also enlarged again. The following was ordered: Chinin, three grains twice daily; a clysma, and only milk as a diet. Two days later pain appeared in the region of the groin. A pain was located at the knee, which place corresponded to the capitulum fibulae. He did not scream in the night. In looking over the history of the case and considering the extreme nervous condition of the patient, neuralgia of the joints was suspected. The feverish condition (Bäumler—*Deutsches Archiv.*, Band III, page 393) could be due to circumstances following typhus. The legs were stretched straight, and a bandage of cartoon was put on the left one extending to the groin.

On the 15th of April, nine days after the appearance of the pain in the leg, upon a consultation with Dr. Schmitz, the following was decided: The left leg bent at the hip joint, somewhat abducted, and lightly rotated outwards. The circumference of the left leg was found to be greater than the right in the region of the groin. The folds in the groin were smoothed out. There was considerable sensitiveness on pressing the fovea subungualis. On account of the great pain and the nervous irritability of the patient—which last condition together with his general weakness made an anæsthetic inadvisable—a satisfactory examination of the movements of the joints could not be carried out. A thickening of the bones themselves was not established. Inspection and palpation on both inner and outer sides of the knee—where the pain was located—did not give any evidence of an alteration of the joint. Such a condition led Dr. Schmitz to consider it the beginning of coxitis; and therefore pasteboard splints were immediately applied to the whole extremity and pelvis. Internally there was ordered: Decoction chinæ acid., four desertspoonfuls daily and a nourishing diet, such as meat-broth milk, beefsteak and the like.

April 20: Chills and fevers raised the temperature to 39° centigrade, in which condition with morning remissions, the patient remained three days. On account of the chills the bandage was taken off, and the leg again inspected when the left knee was found to be considerably swollen. The feverish condition in consequence of catarrh of the stomach, explains the constipation, nausea, and coated tongue.

April 26: On medical consultation the bandage was changed. As the case from now on required surgical treatment, Dr. Anders assumed the further therapeutical measures.

April 28: The swelling of the left knee had somewhat diminished. A decubitus had formed on the inside of the same, roundish in shape with a diameter of one and a half centimeters.

May 7: Plaster cast. The application of the cast had a marked influence upon the patient. The night before the application, his sleep was constantly disturbed, his pulse beat 160, and his temperature had risen to 39° centigrade. After the leg was put in the cast the patient became evidently more restful, the temperature fell, and his face had a marked better appearance. Constipation yet remained, so that it was necessary to resort to a clyisma every day.

I am indebted to Dr. Anders for the following memoranda:

On the 28th of April the status *præsens* was as follows: Great pain in the leg, when the least disturbed; pain local; the knee very sensitive; a slight adduction, and correspondingly, a scarcely perceptible shortening of the extremity; diffuse swelling in the inguinal region. The therapeutical efforts by extension and immobility, had reached so far that an effect had been produced upon the diseased joint.

Eight days after the application of the plaster cast, a bivalvous felt bandage was applied by Dr. Anders, which was worn without intermission, over two months (from the 18th of May to the 23d of July).

This apparatus is used very much and with great success in the private practice of Dr. Anders. It also proved to be very efficient in this case on account of its exceedingly great firmness and lightness. This bandage was so applied that it was possible to get a direct extension to the leg by means of an adhesive plaster. It is due to this method that under such difficult and complicated conditions, we were able to avoid a more perverse situation.

The adduction gradually relaxed, so that a perfect extension of the hip was presented. Otherwise, the conditions which we had to contend with were very difficult.

A short visit which he made in the country on the 22d of May had a favorable influence upon the patient; yet his strength, through a long siege of sickness, protracted convalescence, and deep-seated decubitus, was very much exhausted.

The treatment (iodoform and protective) for the cubital deformities was comparatively easy after the bandages were removed. At the end of a month, during which time this treatment was uninterruptedly continued, the patient was not able to use nor even lift up his well leg. The Faradic current was therefore applied to this leg for one month, from July 10 to August 10.

On the 9th of June an attempt was made to put the patient on his feet, and of course only on the well leg at first. As movement was a question of life and death with the patient, it was decided that he should use crutches for several weeks, and wear a high-soled shoe on his well foot, and not use the diseased one which was constantly kept in a felt bandage. Now the patient improved more rapidly. Meanwhile a new disturb-

ance set in; the two arms, through the use of the crutches, appeared slightly paralyzed. The Faradic current was also applied to these. The difficulty was augmented in that the knee joint stiffened more and more. From now on friction, passive gymnastics, and massage were applied to the diseased extremity. As it was urgently necessary, on account of the paralysis of the arms, a very finely finished protection apparatus of the whole extremity and pelvis was brought into use August 23. This apparatus, constructed according to the specifications of Dr. Anders, is a combination of Helsing's and Taylor's coxitis apparatus, and completely unburdens the extremity in walking by transferring the pressure upon the tuber ischii. The patient soon learned to move about with this apparatus.

Now a suddenly developed curvature of the spine toward the diseased side appeared. This was treated with gymnastics and massage with very successful results. The diseased extremity, which had become somewhat atrophied, was electrized for about a month.

In the meantime the constitution of the boy had improved very much; he had grown considerably. The knee could be bent at an angle of 108° . The hip at this time, although it had very little movement, was entirely painless, and not swollen in the least. The patient wore a pair of shoulder-straps, which held the upper part of the body firmer; they were buckeled to the pelvic part of the apparatus.

Judging from the progress of the case, the patient is advancing toward complete recovery.

HOSPITAL REPORTS.

RANDALL'S ISLAND HOSPITALS, NEW YORK.

MEDICAL WARDS.

REPORTED BY W. E. HALLOWELL, M. D., SENIOR ASSISTANT.

FOUR IMPORTANT CASES.

Infant McL., age —, nursing.

March 27, 7:30 P. M.: Two spots resembling bruises were observed on the back, one, round and about one-half an inch in diameter, opposite the posterior branch of the second dorsal artery, and the other, two inches long and three-fourths of an inch wide, over the first part of the course of the tenth intercostal artery. The mother had been suspected of beating the child, so much did the spots resemble bruises.

March 28, 9 A. M.: Three other spots, like the first above described had appeared on the back, each over the point of exit of a posterior dorsal branch. An ointment of tincture belladonna, two drachms, and glycerine, one ounce was rubbed on over the spots frequently during the day. At this time the child seemed well though a little weak.

March 28, 6:30 P. M.: Suddenly signs of heart failure showed themselves, the heart-beat becoming very weak, the surface cold and the temperature subnormal. Tincture digitalis five minims and spirits vini gallici, twenty minims, were given every hour through the night and the following day, with no apparent result.

March 29, P. M.: Several ounces of blood were vomited and a large amount of blood suddenly passed from the bowels. Oil terebinthinæ, one-half minim, acid tannici, two and one-half grains, were given every hour until death which occurred the next morning.

Postmortem examination.—The body was well nourished. The spots above described were found upon the back. On dissection, the connective tissue was found infiltrated with blood. In three of the spots the artery was examined but no rupture was found. The brain and its membranes were normal. About half an ounce of liquid blood was found in each pleura but there was no mark on the membrane indicating its escape. The anterior mediastinum was filled with blood. The thymus gland, two and one-half inches long, one and three-fourths inches wide, and one-half an inch thick, was softened and infiltrated with blood. The pericardium was distended by a firm clot. Punctate hæmorrhages were observed in the lower lobe of the right lung, and the lower lobes of both lungs showed hypostatic congestion. The lower half of the intestines was filled with clotted blood. In every situation in which hæmorrhage was found, the locality of the bleeding was carefully sought for, but in no case was it found. The peritoneum was normal.

Lizzie Wilkinson, age thirteen months, bottle-fed infant.

For three weeks previous to the first observation she was affected with some difficulty of breathing, and for several days she was given digitalis and ammonia.

September 17, 7 P. M.: The left lung was found completely consolidated, and numerous creaking and subcrepitant rales were heard in the right lung. Her breathing showed very plainly the expiratory gasp of pneumonia. Temperature 101.4°; pulse 150; respiration 28. She was given tincture digitalis, five minims and extract ipecac, fluid, one and one-half minims, every two hours. Two ounces of brandy were given each twenty-four hours. In the evening her temperature was 101°.

September 19, 8:30 A. M.: Her breathing was still very bad

but the dry rales had given place to moist ones. Temperature, 100°; pulse, 136. Her medicine was changed to tincture belladonna, one minim, tincture digitalis, five minims, and ammonia carbonate, one grain, every two hours.

September 20, A. M.: Her pulse was 120 and it intermitted occasionally, but there was a general look of improvement about the case. Temperature, 100°. By the order of the visiting physician, given the preceding afternoon, she was given one-tenth of a minim of tincture veratrum viride, the digitalis was stopped and she was also given tincture belladonna, one and one-half minims and ammonia chloride, two and one-half grains every three hours. At 1:30 P. M. her pulse had risen to 145; at 6:30 P. M. to 148, and her temperature was 102°. She died early the next morning.

Postmortem.—The right pleural sac contained about an ounce of serum, slightly turbid with pus and a small amount of very recent, purulent exudation was seen on the costal pleura. The right lung was congested, especially, by hypostasis, the lower and posterior portion. It was somewhat oedematous. The left pleural cavity contained about two ounces of a quite opaque sero-purulent fluid, and the sac was lined with recent purulent lymph. No adhesions existed. The upper lobe of the left lung was mottled, showing patches of hepatized lung, together with congested portions, permeable by air. It was thought to be in a state of commencing resolution. The remainder of the left lung was in the stage of red hepatization. The liver and kidneys were in a state of parenchymatous degeneration. There was a general bronchitis.

Although the autopsy showed a condition which could hardly have been recovered from. I think that the change of treatment on September 20, materially hastened her death.

Mrs. Quinn, age forty-three; nursing mother.

On the night of September 15, she had repeated severe chills and in the morning her temperature was 104.5°, and her breasts were very hard, swollen and tender. Within four hours on the morning of the 16th she was given twenty grains of quinine, and an ointment of tincture belladonna, two drachms, chloroform, one-half drachm, and glycerine, one ounce was kept applied to her breasts. Her child continued to suckle, the breasts of course being cleansed before each nursing. The chloroform was introduced into the prescription with the idea of increasing the absorption of the belladonna. (Ringer—"Therapeutics," page, 359.) I have used it several times for this purpose and it seems to heighten the activity of the belladonna application.

September 16, 6:30 P. M.: The breasts are quite soft but slightly tender. Temperature 101°.

September 16, 10 A. M.: The breasts are well but the milk

has been suppressed. The child continues to suckle but can extract no milk. Another strong child failed after repeated trials. Friction and kneading were employed in vain.

September 18, 9:30 A. M.: She was given extract pilocarpine, fluid, twenty minims, every three hours, and an ointment of extract pilocarpine, fluid, one ounce, chloroform, one-half drachm, and glycerine, one ounce was kept applied to the breasts.

September 19, 9:30 A. M.: The milk is quite abundant in her breasts. The medicine produced some sweating and quite free catharsis but no nausea or depression. The child was again put upon the breast and the internal administration of jaborandi was stopped though the lotion was continued.

September 20: The breasts were full of milk and treatment was stopped. The child was not affected by either medicine.

Margaret Kennedy, age forty-five.

The patient was admitted with an ulcer over the right external malleolus. No record of the treatment of this ulcer has been kept, but at the onset of the result to be reported it was in strapping.

September 12, 7 P. M.: She had repeated severe chills with a temperature of about 103° (the record was not kept), continuing until September 16. On the first night a slight blush of erysipelas appeared at the upper margin of the ulcer. On this night she was given ten grains of quinine, on September 13 thirty grains, on September 14 ten grains with no effect on the chills, temperature or erysipelas which continued to spread rapidly. On September 16, at 10 A. M., the erysipelas had covered the leg, the line of demarkation being at the knee. Hypodermic injections of ten minims each of a one to twenty solution of carbolic acid were made at intervals of one inch around the leg just outside the line of inflammation. Eleven injections were made. The limb was enveloped for a few hours in lead and opium wash by mistake, but afterward in one to forty carbolic acid solution. On the next morning the advance of the erysipelas seemed to be arrested and during the day the inflammation appeared to have nearly subsided. The next morning, September 18, her temperature was normal. In the evening her temperature rose to 101° and the erysipelas was advancing up the inner side of the thigh, though it had not revived on the leg. On the next morning five new injections were made across the front of the inflammation advancing up the thigh. She had a slight chill early this morning but her temperature was normal. The next morning the inflammation had disappeared and only a slight thickening remained over the skin which had been affected. She was given tincture ferri chloride, five minims, every three hours. On September 23, nearly all the thickening had subsided.

MICHIGAN STATE HOSPITAL.

SURGICAL CLINIC.

UNDER DONALD MACLEAN, M. D.,

Professor of Surgery and Clinical Surgery in the University of Michigan.

REPORTED BY J. E. WALTERS, ATTENDANT.

A CASE OF RESECTION FOR NON-UNION OF THE HUMERUS.

John Larson; Swede; aged twenty-three; occupation, lumberman. Admitted January 15, 1884.

History.—Early in the fall, about the middle of October, while hewing timber, the branch of a falling tree struck his arm, and fractured the humerus, in the upper portion of the middle third. He was taken to the hospital for the use of lumbermen of the section, but was not seen by a physician for twelve hours after the accident, who then set the broken bone, using felt splints; the outer one extended from an inch above the elbow to the neck, moulding it to the form of the shoulder; the inner extended from the elbow to the axilla. The forearm was flexed to a right angle to the arm, and swung in a sling. The arm was kept quiet, and the splints were not disturbed for eleven days. Another physician removed the splints and examined the arm twelve or thirteen days afterwards. The patient says the physician found union, but the ends of the bone overlapped. Two other physicians were called in consultation; the bone was rebroken and splints again applied. These splints were worn by the patient when he was admitted to the hospital ten weeks after the accident. At this time the patient was in poor general health. He was pale, weak and emaciated; much dejected and not disposed to take exercise. His face was covered with a pustular eruption.

January 16: Dr. Maclean examined the arm and found considerable movement at the seat of fracture. The ends of the bone were overlapped.

January 19: Preparatory to the operation his arm was put in as straight a position as possible, and a plaster cast applied, extending from the shoulder to the wrist.

January 21: The patient not being able to understand the English language intelligently, the proposed operation was explained to him through an interpreter. The arm was examined, and the operation of resection performed before the class. Anæsthetics were used, and the Esmarch's rubber bandage applied. A free incision over four inches long was made over the seat of fracture, and continued down to the bone along the intermuscular septum between the biceps muscle and the deltoid and outer head of the triceps. The fracture was extremely oblique, and the pointed ends of the bone bound together with a considerable quantity of ligamentous tissue. The fractured

ends were cut square across with a chain saw, removing several inches of bone. The dental engine was used to drill holes through the bone near the sawed ends, through which silver wires were passed, drawing the ends of the bone together and holding them somewhat firmly in place. The hæmorrhage was not very active, but difficult to control. For a considerable time there was persistent oozing from every part of the wound. The only artery ligated was the superior profunda, which required a ligature at both its proximal and distal openings. When the hæmorrhage was controlled a rubber drainage tube was inserted, and the wound closed with silver and horse-hair sutures. Oiled silk was placed over the wound, and the arm done up in cotton, and the plaster cast re-applied. A window was made in the cast for dressing the wound.

January 22: The vomiting which followed the use of the anæsthetic continued, more or less through the night. A hypodermic injection of one-sixth of a grain of morphia was administered during the night to allay the vomiting and to relieve pain which the patient located in his shoulder and elbow. Morning temperature, 100° Fahrenheit; pulse, 126. Evening temperature, 100.5° Fahrenheit; pulse, 108.

January 23: Taking food caused the vomiting to be renewed, with pain in the stomach. These symptoms, with headache, continued through the day, but abated toward evening. In the evening the wound was dressed through the window made in the cast. The wound looked healthy. Warm water, carbolized, was always used for cleansing the wound. Morning temperature, 102.5° Fahrenheit; pulse, 116. Evening temperature, 101.5° Fahrenheit; pulse, 108.

February 7: To-day the horse-hair sutures were removed. The silver ones having been removed ten days after the operation. The wound had not fully united, and gaped quite widely. Since the last record the temperature varied from normal to 99.5° Fahrenheit. During this period the wound had been dressed twice daily, and had continued to look healthy. To-day fluctuation was detected on the inner side of the arm at the point of fracture. Evidences of absorption of septic matter now began to show themselves. The evening temperature recorded 103° Fahrenheit, and the pulse was 130. Fifteen grains of sulphate of quinine were given. Two similar doses were administered every third hour. The abscess was opened, but careful examination failed to find any communication to the ends of the bone or with the wire which held them together.

February 8: Spells of vomiting, which followed the anæsthetic that was given when the abscess was opened, continued frequently through the night and day. The wound, which previously had been looking very healthy, began, to inflame and became swollen. The discharge, which up to this time had been healthy, became suppressed.

February 9: Patient feeling better. Temperature reduced to normal. The discharge has returned, being greatly increased in quantity and of an unhealthy character.

February 12: Patient continues to do well. A counter puncture was made into the abscess cavity. About four ounces of pus were evacuated, having a slight fetid odor. The wound has lost its inflamed appearance, and the discharge has become healthy.

March 5: During the interval from February 12, until this date the temperature would occasionally rise to 103° Fahrenheit, being due to slight attacks of septicæmia which readily yielded to the administration of quinine. The elbow somewhat firmly ankylosed. Anæsthetic administered and the adhesions broken up. No movement at seat of fracture. The bones are firmly united. Passive movements are to be made every day. The plaster cast left off and short splints applied. The forearm flexed and placed in a sling.

March 12: Patient's general health very much improved, appetite good, and strength gradually increasing.

April 2: Discharge continues quite profuse through both wounds. The most careful examination does not reveal any dead bone. Health and strength continues to improve.

May 12: The discharge has diminished but little in amount but has improved in quality. Anæsthetic administered and the constricted openings freely enlarged. The point of fracture examined. Large amount of callus; no sign of silver wire, it being thoroughly imbedded in the new bone. The wounds kept open with oakum tents.

May 21: Wounds almost completely healed. Discharge small and healthy. Patient feels well and enjoys good health.

May 28: Wounds not doing well. Inflamed and swollen. Discharge increased. Some irritation at the fracture.

June 4: Wound healthy. Practically no discharge.

June 10: Wound nearly healed. Movements of arm good and free. It is rapidly becoming strong. General health completely restored. Dismissed.

EDITORIAL PERISCOPE.

A NEW DEPARTURE.

The circular letter of Dr. Donald Maclean, President of the Michigan State Medical Society, in substance, is printed below. It is evident that the next meeting of the society will be one of unusual interest and value. The execution of the plan proposed by the president, will obviate the unsatisfactory manner of reading papers that has been practiced. To not know when,

if at all, a paper is to be read and discussed, and to have the programme changed each session of the meeting, make confusion and tend to destroy the benefits and interest of the society. But since new life has been awakened, and fresh energy created by the large amount of young blood that has been brought into it the past two years, it is to be expected that a new order of things will be instituted. These young men of the profession have become members of the society to benefit and be benefitted by proclaiming and listening to the results of scientific research and experiment. They have no more interest in the politics of the society, than to keep its peace-disturbing effects out of the society's meetings. The objects of the letter are so clearly stated, and the results to be obtained so practical, that no further notice than its publication need be made.

72 LAFAYETTE AVENUE, DETROIT, MICHIGAN, }
September 2, 1884.

To —, Member of the Michigan State Medical Association:

Dear Doctor—With the view of promoting the transaction of scientific business at the next meeting of the State Medical Society, the following plan will, with the consent and coöperation of those interested, be followed:

Any member who proposes to present a paper at the meeting will be expected to communicate with the chairman of the committee of the department to which the paper belongs not later than March 1, 1885, informing him of the title and tenor of his or her paper; or better still, submitting the paper itself to the committee. From the papers so submitted the committee will select those which are to be read, and determine the order of their presentation.

For *each paper* so selected, the committee will also make a definite arrangement with some one member of the association, whose duty it shall be to come to the meeting prepared to "open the discussion" on the subject of that particular paper.

As soon after March 1 as possible, the chairman of each committee will be expected to forward to the secretary, Dr. Ranney, a full report of the work accomplished in this direction by his committee, and from this report the secretary will be able to compile the programme of scientific work to be carried out at the meeting of the association, with the names of the authors of papers, and of those who are to lead in the discussions.

As soon after March 1 as may be found practicable, this programme will be furnished to every member of the association, and to the medical journals of the State for publication. Any member having special knowledge concerning the papers or subjects named in the programme, or possessing specimens or appliances having relation thereto, will thus be enabled to come to the meeting prepared to give the association the benefit of

the same. Additional papers, cases, specimens, etc., may be presented after the regular programme has been carried out.

It is confidently hoped that by following the method thus outlined, in preference to the old plan referred to in Section VI of Article III of the By-Laws, the despatch of business by the association will be materially facilitated.

Truly yours,

DONALD MACLEAN.

The following committees have been appointed by Dr. Donald Maclean, President of the Michigan State Medical Society for the ensuing year, including two committees appointed at the last meeting of the society by President Dr. A. F. Whelan:

State Sanitation—H. M. Hurd, Pontiac, Chairman; V. C. Vaughan, Ann Arbor; J. B. Griswold, Grand Rapids; N. H. Williams, Jackson; C. W. Morse, Dowagiac.

Obstetrics—E. P. Christian, Wyandotte, Chairman; A. F. Kinne, Ypsilanti; E. S. Dunster, Ann Arbor; Mina Logue, Adrian; Amy G. Kimball, Jackson.

Committee on Temperance Question—WOMAN'S TEMPERANCE UNION—A. B. Palmer, Ann Arbor, Chairman; Charles Shephard, Grand Rapids; L. W. Bliss, Saginaw City; A. F. Whelan, Hillsdale; J. S. Hamilton, Tecumseh; P. Belle Warner, Ypsilanti.

Ophthalmology and Otology—C. J. Lundy, Detroit, Chairman; R. J. Kirkland, Grand Rapids; Leartus Connor, Detroit; W. N. Smart, Grand Haven.

Publication—Eugene Boise, Grand Rapids, Chairman; Harvey Williams, East Saginaw; Harris B. Osborne, Kalamazoo; William Parmenter, Vermontville; George E. Ranney, Lansing.

Admission—H. F. Sigler, Detroit, Chairman; John P. Stoddard, Muskegon; Donald A. Maclean, Stanton; L. G. North, Tecumseh; E. L. Kimball, Jackson.

Finance—C. T. Newkirk, Bay City, Chairman; Hamilton E. Smith, Detroit; G. L. Rose, Decatur; I. O. Edie, Grand Rapids; M. W. Tomlinson, Battle Creek.

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Special committees appointed at the last annual meeting by the outgoing president, Dr. A. F. Whelan:

On Medical Legislation—Foster Pratt, Kalamazoo, Chairman; William Parmenter, Vermontville; C. V. Tyler, Bay City; Augustus Kaiser, Detroit; A. R. Smart, Hudson.

On Reorganization of Society—G. K. Johnson, Grand Rapids; A. W. Alvord, Battle Creek; Hugh McColl, Lapeer; L. Connor, Detroit; W. F. Breakey, Ann Arbor.

JEQUIRITY.

It is very difficult to determine, from the literature, whether jequirity can be regarded a beneficial or an injurious addition to ocular therapeutics. The results obtained by investigators are too diverse to lead to any definite conclusions. One contributor on the subject says: "I know of no remedy that can compete with it in efficacy in the cure of trachoma with pannus." In the same paragraph the writer observes: "The inflammation set up by it is sometimes so severe as to cause apprehension lest it might produce sloughing of the cornea, as in purulent conjunctivitis."

Here is the danger. Ulceration of the corneæ has resulted with eminent oculists who have had considerable experience in the use of the drug. It would seem that jequirity must be regarded a dangerous remedy until its violent action can be controlled. That point in the treatment of inflammation has not yet been reached when its destructive results can be stopped at will. Experience has shown that a weak infusion, frequently applied, generally leaves the structures of the lids in a worse condition than before the applications were made, while the inflammation produced by a strong infusion cannot be controlled. From careful and repeated observations of the action of jequirity, Dr. Emil Gruening (*Archives of Ophthalmology*), makes the following propositions:

(1) The use of a five per cent. infusion of jequirity is attended with danger to the cornea.

(2) The action of the two per cent., two-and-a-half per cent., and five per cent. infusions of jequirity upon granulations is inconstant. The granulations are either not effected at all or are changed into dense cicatricial tissue. Their disappearance without conjunctival alteration is rare.

(3) Jequirity acts more favorably than any other known substance upon pannus, accompanying or following the granular condition of the lids.

In the same journal from which the above propositions were taken, Dr. Knapp contributes a paper on his clinical observations of the use of jequirity, to which he adds the following supplement:

"While the foregoing paper was going through the press,

two of the cases which were treated according to De Wecker's last directions (one brushing of a fresh three per cent. solution macerated three hours, over everted upper lip) were followed by a most intense reaction: membranes marked, and when, three days later, they were cast off, a most violent pyorrhœa followed, which in two days affected the other (not inoculated) eye. In both corneæ of one patient there were extensive central perforative ulcers; the corneæ of the other are free thus far. Both patients were treated in the hospital. The first, in which the corneæ had ordinary trachomatous pannus, had no discharge, no corneal ulcers. In the other the corneæ were but slightly opaque."

"These cases, while under my daily supervision at the hospital, presented, after one mild jequirity application, a picture *identical with acute diphtheria of the conjunctiva in all its disastrous features*. Making due allowance for the depressing influence of this sad observation, I must confess that it has greatly lowered my expectations of the future of jequirity. What has occurred in my practice—now in three cases—may occur in the practice of others."

This writer makes the following summary from his experience:

"(1) Jequirity cures trachoma more quickly, but less safely than other remedies.

"(2) Its action is highly beneficial in most cases, but neither uniform nor always controllable.

"(3) The cure of trachoma by jequirity as well as by nature and other remedies, is accompanied by more or less atrophy of the conjunctiva and the formation of cicatricial tissue.

"(4) The greatest danger from the use of jequirity consists in the occasional development of a severe diphtheritic conjunctivitis followed by pyorrhœa and more or less extensive destruction of the cornea.

"(5) The use of jequirity ought to be restricted to cases of old, intractable pannus, until cautious experimentation has determined the condition under which we can obtain the benefit of this powerful remedy, divested from its danger.

Are not three such unhappy results as central corneal ulceration and perforation, occurring in quick succession, sufficient to lower the expectations for good, not only in the unfortunate investigator, but in all who have had high anticipations in the usefulness of jequirity?

New remedies by many, are accepted unhesitatingly from blind untried faith, or are unreasonably rejected from prejudice. Happily such has not been the case with jequirity. While the first publications of De Wecker contained so much that was satisfactory to the profession, and beneficial to the people, as to cause him to be regarded as a public benefactor, there was created, in the minds of the cautious, a fear and dread

of its rapid action and powerful effects. It was the enumeration of its rapid and profound action that caused Dr. Frothingham to remark,* after making the following quotation from De Wecker, "Incontestably the cornea runs no risk during the course of jequiritic ophthalmia, and that incontestably jequiritic ophthalmia cures granulations rapidly," that "we are bound as prudent practitioners to accept with reserve these statements."

The uncontrolled action and the destructive effects shown in Dr. Knapp's cases proves the value and truth contained in this statement made by Dr. Frothingham in his clinical remarks: "A remedy which in six hours will produce a severe form of conjunctivitis which has in that short time invaded the surrounding tissue, producing such swelling of the lid as to prevent it being everted, or even raised sufficiently to inspect the cornea, with severe chemoses, high fever, nausea and loss of appetite, is sufficient of itself, to show us that the cornea is in imminent danger, and may be destroyed before this severe inflammation can be controlled. Its purely local action is so intense and dangerous that we should use it, only after the most extensive experiments upon animals have established the fact that these symptoms, when aroused by jequirity, are not attended by the same danger as when excited by other agents."

CONDENSATIONS.

IN this number is published in full the address on "Heredity" by Dr. John P. Gray. The views taken by this eminent neurologist are in true accord with the great laws that govern the perpetuation of the species, but they are not the ones given by most medical men and lawyers in the courts. From a medico-legal stand-point the article has great value.

THE physiological effects of the preparations of caffein closely resemble those of digitalis. They regulate the heart power, increasing the force, and slowing the action of the heart. They act very rapidly and show in the increased flow of urine a strong diuretic action. The indications for their uses are about the same as those for digitalis, but they act more rapidly. Not having the accumulative effect of digitalis, their effect is best obtained by small and frequent doses which can be given without danger. They should not be administered in combination or at the same time as narcotics, and especially morphia. These are the important thoughts of a paper read by Dr. Riegel at the recent medical congress at Berlin.

WHILE there is no doubt that our advertisers realize the great benefit derived from occupying space on the pages of

*THE PHYSICIAN AND SURGEON: Volume VI, Number IV.

THE PHYSICIAN AND SURGEON, they could more definitely credit their good results, if our readers who make inquiry or send orders would take the care to mention THE PHYSICIAN AND SURGEON, as the medium through which they received their information. It has never been the policy of this journal to insert reading notices excepting as miscellaneous items. Advertising pages are never interleaved through its forms. The space hired has always been considered worth the contract price. It is, however, but right that the advertiser be informed through what medium he receives the profits of his enterprise, and it is a just and deserving compliment that should be given the journal by its readers.

NEW PUBLICATIONS.

A MANUAL OF OBSTETRICS. By A. F. A. King, M. D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, District of Columbia, and in the University of Vermont. Second edition, with fifty-nine illustrations. Philadelphia: Henry C. Lea's Son & Co., 1884. For sale by Sheehan & Co., Ann Arbor, Michigan.

It must be gratifying to a teacher to know that he is assisted in his labors by such a text-book as "King's Manual of Obstetrics." The second edition of this little work is of larger page, and has such additions as to include the present knowledge on the subject. The author has not aimed at originality, for he confesses, that in most part, the work is a compilation from larger and more elaborate treatises; but he has served the student old and established facts, in fresh, crisp language. He has given ancient thoughts new forms, and unchanged terms and objects clear definitions.

YOE'S PHYSIOLOGY: A MANUEL FOR STUDENTS. By Gerald F. Yoe, M. D., F. R. C. S., Professor of Physiology in King's College, London. Small octavo. Over three hundred illustrations; 775 pages. Price—cloth, \$1.00; leather, \$5.00. P. Blakiston, Son & Co., Philadelphia, 1884.

This volume was written because the publishers felt that a book of its kind was needed. It is an elementary treatise for students of medicine. The work is clear and strong for its omissions. Unproven theories and experimental detail are omitted. "Technical terms and scientific modes of expression," have been avoided. Here the author shows true ability as a teacher. He recognizes the difficulty in attempting to explain scientific truths in a matter-of-fact way expressed in common language. But he concludes "that great scientific nicety and scholastic style of expression have a deterrent effect upon the beginner's industry," and his attempt to avoid the

technical, and yet clearly state the elementary principle of physiological science has resulted in giving the beginner a comprehensible book.

The one error, if it can be called such, in the work, is in the author endeavoring to give the anatomy of the various organs. A description of the structure and relations of the numerous parts of the human organism, must of necessity be very brief and imperfect in a work of this character. It is presumed that the student has familiarized himself with the position and structure of an organ before he begins to study its function. This exception does not mar the excellence of the manual as a physiology, and it cannot fail to be gratefully received by every teacher and student, for it supplies a want that has long been felt.

LITERARY NOTES.

THE Saint Louis Medical and Surgical Journal entered upon its fortieth year under new editorial management. This care now rests upon Dr. Legrand Atwood, one of its former associate editors. Its former editor, Dr. Thomas F. Rumbold, is now in Europe gathering data for a revised edition of his work on the "Hygiene and Treatment of Catarrh."

MESSRS. Jansen, McClurg & Co., Chicago, issued about October 1, a new work on the "Principles and Practice of Medicine" by Dr. N. S. Davis. The work is not a compilation, but an embodiment of the observations, thoughts, and experiences of the author during nearly fifty years of active medical practice. The matter is presented in the form of lectures delivered by him during his many years of teaching. The features which especially commend the work to the practitioner and student, are the fullness with which the clinical history of the various diseases is given, and the explicit and detailed description of the methods of treatment which have been found most effective. The author's adoption of the metric system of weights and measures is worthy of notice and commendation. Although this system has been advocated by leading scientific and medical societies, it has come into use only to a limited extent. To assist in effecting this change, Dr. Davis has used the metric system throughout the work, giving however, in brackets, the equivalent in apothecaries' measure.

The volume is about the size of Bartholow's "Practice of Medicine" but more closely printed. The author is known throughout the country as one of the ablest and most original thinkers in the profession, who has won a high reputation as a lecturer upon practical medicine; and the profession is to be congratulated upon having in a permanent form the rich results of his busy professional life.

BOOKS AND PAMPHLETS RECEIVED.

ELEVENTH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN, for the fiscal year ending September 30, 1883. Lansing, Michigan: W. S. George & Co., State Printers and Binders.

MEDICAL JURISPRUDENCE AND TOXICOLOGY. By John J. Reese, M. D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania; Vice-President of the Medical Jurisprudence Society of Philadelphia; Physician to Saint Joseph's Hospital, etc., etc. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street, 1884.

PATHOLOGY AND MORBID ANATOMY. By T. Henry Green, M. D., London, Fellow of the Royal College of Physicians, London; Physician to Charing Cross Hospital, and Lecturer on Pathology and Morbid Anatomy at the Charing Cross Hospital Medical School, etc., etc. Fifth American from the Sixth revised and enlarged English edition. Philadelphia: Henry C. Lea's Son & Co., 1884.

QUIZ COMPENDS: ORGANIC AND MEDICAL CHEMISTRY, INCLUDING ANALYSIS OF URINE AND THE EXAMINATION OF WATER AND FOOD. By Henry Leffmann, M. D., D. D. S., Professor of Chemistry and Metallurgy in the Pennsylvania College of Dental Surgery, and of Clinical Chemistry and Hygiene in the Philadelphia Polyclinic. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street, 1884.

DISEASES OF THE THROAT AND NOSE. By Morell Mackenzie, M. D., London, Consulting Physician to the Hospital for Diseases of the Throat; Lecturer on Diseases of the Throat at the London Hospital Medical College, and Corresponding Member of the Imperial Royal Society of Physicians of Vienna. Volume II: Diseases of the Oesophagus, Nose, and Naso-pharynx. Illustrated. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street, 1884.

MEDICAL DIGEST.

HEREDITY.*

BY JOHN P. GRAY, M. D., LL. D., UTICA, NEW YORK.
Superintendent of the State Lunatic Asylum.

Heredity is one of the indisputable facts in nature. It confronts us at the outset, in the study of natural science, medicine and jurisprudence, and bears upon the most important subjects connected with social life, whether viewed from a scientific or practical stand-point.

In his "First Principles" Herbert Spencer states the general

* Address as President of the Association of Medical Superintendents of American Institutions for the Insane, delivered at the Thirty-eighth Annual Meeting, held at Philadelphia, Pennsylvania, May 13, 1884.

law of heredity as follows: "Understood in its entirety the law is that each plant or animal produces others of like kind with itself." Herbert Spencer's dictum amounts really to saying that every organism tends to re-produce its kind, and this he limits by adding that the likeness consists "not so much in a repetition of our individual traits as in the assumption of the same general structure."

Some writers (Mercier and Ribot) have tried to graft upon this simple proposition the statement as a law, that "every attribute of the parent tends to be inherited by the offspring. Inheritance is the rule; non-inheritance the exception."* That is to say, all the characteristics and peculiarities, however trifling, tend to be inherited, and will be, unless prevented by some opposing influence.

This is made to include what is called "morbid heredity," the characters of disease, as well as the structural and other physical traits. This morbid heredity is made to begin with the act of generation. "As far as the father's influence is concerned, any hereditary predisposition which may exist may be transmitted at the moment of conception; when the ovum is impregnated it is subjected to the mother's diseases or predisposition to disease."†

The same writer quotes Lucas as to the question whether this principle of heredity applies to disordered as well as healthy mental characteristics. Lucas says, "There is no pathological state of being where the intervention of morbid heredity is more remarkable and more remarked." He quotes also the declaration of Burrows; that while "mania and melancholia do not propagate their respective types,"—"one type only of mental derangement can be said to propagate itself—the propensity to suicide." He refers also to Moreau and other authors to show that "cerebral disorder may be transmitted by either parent."

We might add largely to this list and refer to the many cases that are cited to sustain this view. We have made these few quotations simply to show what is meant by the term morbid heredity. Cases are not only numerous given by authors, but the various facts collated as to variation and domestication of animals and plants are brought in to sustain this theory of morbid transmission as a principal factor in insanity; and even the chemistry of metals and gasses is applied to the nervous system‡ to show the *rationale* of inbreeding, hybridism, and crossing of parentage.

Now, so far from its being true that every attribute tends to be inherited, we had supposed that even on the theory of evolution itself, by what Mr. Darwin has to call "some unknown

* Mercier, *Journal Mental Science*, October, 1882, page 337.

† Bucknill and Tuke, page 66.

‡ Mercier, *Journal Mental Science*, January, 1883.

law in the constitution of the organism," and for the protection of the species itself, there was an inherited tendency just the other way; that is to eliminate all unfavorable attributes of progenitors, whether by disease or otherwise, and whether acquired by accidents of environment or otherwise. We believe this to be the true law in nature. Disease is a "tendency" to death, to extinction. The "tendency" in *genera* and species is directly antagonistic to this—that is to life and perpetuation. Were it otherwise, were the law and "tendency" of nature to continue and intensify these destructive operations, its cumulative force would soon bring species to an end. The fact is, the whole force of an organism, as an organism, is set in array against any disintegrating influence, whether in the structure itself, or the environment. More facts can be gathered to show how unfavorable conditions in the structure, or morbid functions in the organism, have been neutralized or overcome in the offspring than can be adduced for any special morbid transmission. Indeed, what is often attributed to "morbid heredity" will be found to be due simply to parallelism or similarity in education and environment. Special characters are often due to unconscious imitation from infancy to manhood; a gradual process of education; like causes are apt to produce like effects, without the necessity of being handed down through natural generation. Indeed, this is accepted as a rule. If puerperal conditions, or grief, or the worry of failure in business or other nervous shock or excitement produces insanity, it is not because there is any inherent connection between these things and insanity, but because they all *may* produce a certain effect upon the brain in its circulation and nutrition, interfering with its normal physiological operations; and if this effect is seen more speedily in some physical structures than others, while it is proper enough to say that the structures were inherited, it is not proper to say that they carried in them the disease which was the result of external influences.

An "insane diathesis" is a pure verbal fiction. The frailest physical structure will not develop insanity without an external cause, and the causes, as observed under experience, are largely within the control of due precautions. It is not unusual that writers have allowed a mere theory to run away with them, and it would not be difficult to give examples of many exploded theories in connection with psychology and insanity. Ribot has whole chapters on heredity of imagination in poets, in painters, in musicians, in men of science, philosophers and economists, authors and men of letters.

Now, no one would like to lay down a law that the son of a genius shall never in any case be a genius himself, but we are willing to leave it to the verdict of history whether hereditary genius in literature or art is not rather conspicuous by its

absence. Of course, in support of any theory whatever, associated with life, a quantity of facts may always be forthcoming, but any catalogue of facts that can be made will always leave a majority of *all* the facts still to be integrated in a final system.

The facts that relate merely to structural features, supernumerary members, variations of aspect, size, color, etc., have nothing to do with the transmission of morbid processes, but are simply varieties of abnormal peculiarities. Might we not as well pretend that a bruised fruit or seed would perpetuate its bruises as that a human organism would transmit a wound or a disease? Heredity has its proper place in natural science, and is but the expression of the primeval law of species; but we cannot admit that it is responsible for such a thing as a positive disease of the brain, which all admit is the only basis of insanity, the mental disturbances being but symptoms of such disease. Morbid affections of the human organism developed by causes *ab extra* are to be distinguished from those normal forces of the organism that are inherent and operate *ab intra*.

While recognizing the great importance of heredity and admitting that it deserves great consideration in its bearing upon the development of man and the determination of his physical traits, I am equally satisfied that undue importance is attached to heredity in connection with the causation of insanity. The transmission of a physical type, with more or less resemblance, we have said, is a law of nature, and this law tends to maintain and perpetuate races and families. This law is written on men and animals, on trees, flowers and vegetation, generally. It is a conserving, universal law in nature. The natural physical characteristics in families may in some members by intermarriage be intensified, but not to any great extent. The nose, the mouth, and the eyes, more frequently than any other part of the organism may have significant family or race type, and be very strongly marked in certain members. Occasionally a monstrosity of structure may appear in the hands or feet, and be perpetuated through two or three generations, in some members of the family; such as five or six fingers or supernumerary toes, but these monstrosities are deviations in excess and are not permanently held as in the type. No six-fingered or seven-toed family has ever been established. Double-headed or four-armed, and three and four-legged people have been born, and some of them have lived to adult life. There are no instances of transmission. Cross-eyed, near-sighted vision, and such other physical deviations as have been mentioned, it must be borne in mind, are not instances of disease. These organs are healthy, just as crooked legs may be healthy, and they cannot properly be used as illustrations of the heredity of disease. Disease is not a law of our physical or mental being. No person has ever been

born insane. No person ever became insane simply because his father or mother, or both, or his grand-parents were insane. No person ever became insane simply because of any impression arising from parentage upon either his physical or mental constitution. Every person who becomes insane, whether he has had insane parentage or not, becomes so by reason of some physical causes operating to change the physiological state of the brain. Whatever his parentage may have been, insanity in him can only be developed by the same causes which produce it in persons who have no insane parentage. Parentage cannot impress upon offspring even a tendency, or a "predisposition to insanity." The most it can do is to transmit a physical structure or organization which will be more liable to the operation of ordinary causes that produce disease in any form in people generally, insanity included. Those who have insane persons among their ancestors in a direct line, can only become insane therefore, as other people do, by the operation of the same causes. There is no law in their members tending or dooming or predestinating them to insanity. If they are as strong in system as people who have no insane among their parentage, as they generally are, they have only to take the precaution and care that people generally need, and if they are not as strong, they must take more care against the exposures of life, as all delicate people ought to. This is all there is of this question—the sum and substance of the matter.

Diseases are accidental states produced from causes originating outside of natural bodies and natural states. Disease is not transmitted by birth, as disease, except through blood poisoning of the parent, as in leprosy, syphilis, and, perhaps, cancer. However, in syphilis it ends in the first generation. The deteriorated child of a syphilitic parent cannot transmit syphilis. If the child of syphilitic parents is born healthy, syphilis cannot be developed in any of its forms as the result of parentage alone.

The sins of parents, it is said, may be visited on the children to the third and fourth generation, but this is in their temporal or external consequences.

No man, however, is compelled or impelled by natural or divine law to commit the sins of his fathers. No man is born a forger, a burglar, a thief, an assassin, a murderer, because his grandfather or father represented one or other of these classes of criminals. Such parentage does not either impose a criminal life or a criminal tendency except through the processes of education, any more than a man is born fated to farming or blacksmithing or shoemaking or any other calling by reason of any paternal occupation or bent of mind. Occupations or crimes that are found to run in families are simply the result of education and training. They are not born or inbred. It would not require much observation to show that the sons and

daughters of such persons are not only not destined by birth to the profession or pursuits of their fathers, but are often not inclined to them or competent for them. Good parents have children who grow up in vice and crime, and criminal parents have children who grow up to the most exemplary lives. If this were not so, religion and morality and laws and institutions having for their object the reformation and improvement of mankind, would be meaningless and futile.

The phrase: "Blood will tell," is true in a broad sense. But take the millions of European nationalities who have come to the United States within the past century, a large proportion of whom have through social and governmental conditions that prevail in their native land, been poverty stricken, uneducated, many of them debased physically from dietary causes, and degraded mentally. What of their generations? To be sure many of them have remained just where they were, in poverty and degradation, and their descendants with them, because they have continued in the same plane of life. But the vast majority of their descendants have risen above the generations behind them under the improved conditions which they have voluntarily sought or have drifted into. It is true that while harmonizing with their new surroundings the descendants are changed in modes of thought, social ideas, etc., yet they retain the strong race characteristics, the physical and mental type. All this means normal, natural, healthy transmission, influence for good or evil by circumstances and education. Race characteristics remain unchanged. Family types vary; this is the natural law.

We might illustrate this point by the example of Australia. That was at first a penal colony. The conservative law of heredity in operation for a few generations has not only not retained a society of criminals, but has redeemed and elevated their progeny, eliminating the evil mental and physical conditions under favorable surroundings and education. The same is strikingly true of Pitcairn's Island.

Indeed, in our land, the Indians have retained their race attributes against all the resources of Christian civilization and the destructive agencies of governmental power.

I am inclined to think that the doctrine of morbid heredity, so strongly held by some, was derived from a period when philosophy had more influence in forming opinions upon such matters than the science of physiology and practical medical observation.

Perhaps few men are in perfect bodily health, that is, in a state in which every part of the organism is not only in a perfect condition itself, but in which the whole is in harmonious, rhythmical action. Ordinarily effective health is maintained with quite a swing of the pendulum between physiological extremes, and this is varied greatly in different individuals.

But this varying state is not disease; nor are people liable to disease in proportion to general delicacy of structure.

A common method of showing "heredity," is to take some exceptional family, one in a thousand or ten thousand, where several members have been insane. The numerical method does not take into account the accidental or incidental circumstances which develop or intensify the causes capable of producing insanity in each member of the family, without reference to relationship. Again, a family is taken where peculiarities are strongly marked and general family decay has set in. Such persons usually live differently from other people, and finally become eccentric and from depreciated health may become insane. To say that such persons become insane without the operation of the ordinary causes of disease, is unscientific, and these occasional families cannot be taken as evidence of the existence of a law of transmission of disease. Such instances simply prove the accidental conditions already referred to. These cases really do not make any exception to the law of disease as a factor of insanity. I recall an instance where the father became insane and three of seven children. All the children were born before the insanity of the father. There was no insanity on either side of the house. The cause of the insanity in each case was entirely adequate to its development without any reference to relationship or descent.

Practically the whole question of heredity resolves itself into this: How far an attack of insanity may wreck the constitution of a parent, impair the functional energies and by reason thereof give the offspring an enfeebled physical structure, not a structure with a proclivity to insanity or to any other disease, but simply a structure more liable to give way under the common and ordinary exposures of life and the causes which set up morbid processes in the human system. In the same manner an attack of pneumonia, or typhoid fever, or a profound malarial attack may impair the constitution of the parent, and the offspring may be less vigorous, and the resisting power in the organism may be less active, and in all such cases they may be more liable to give way under exposures than if the parent had not suffered constitutional impairment from any of the diseases mentioned.

This, however, is not an inherited proclivity or predisposition to insanity or any other disease, but the child begotten of parents of impaired constitution may (not will) have a feebleness of structure with less resisting power. If such a child is strong and healthy, it is in no more danger than if the parent had not had an attack of insanity or other disease.

The parents cannot impregnate the child with germinal or peculiar cell structure predisposing to insanity or any other disease. If this were so, and there was transmission of disease, under such a theory the child would receive from the parent a

fatal and inevitable proclivity to insanity. In that case, as a logical necessity, the child, whether it developed insanity or not, must retain the fatal power of communicating this proclivity to its offspring, and how is it to be obliterated? . Indeed all that would be necessary under such a theory to start a tainted family line would be for a parent to become insane. No matter what the conditions were that produced depreciation in health in the mother and finally developed insanity, she, having been insane, under such a theory would be endowed with the fatal power of communicating at conception the germ of an "insane diathesis." To be sure, writers put in certain guarding expressions as a caveat against such a logical issue. For example, Dr. Tuke says: * "virtuous and vicious tendencies would often *appear* to be hereditary; or, as congenital, are displayed from the earliest infancy in children subjected to the same educational influences." "The occurrence of insanity in a parent after the birth of the person affected cannot be regarded as a certain proof of hereditary predisposition: at the same time such predisposition remains highly probable; its value may be judged of by the character of the attack under which the patient labored; whether, in short, it appears to have been accidental rather than exceptional." Does not this beg the question?

The dread of heredity lies in the popular belief that it is a law of our being; that somewhere and somehow, lodged in us are the seeds of this disease, and while this has been taught in literature it comes down to us chiefly as a sort of legendary tradition. There are families who, when a member has become insane from legitimate causes, live in dread throughout their lives, covering ten, twenty and thirty years, and every illness and every condition of nervous depression wakes up a dread of insanity.

There is no reason why insanity should be especially selected, except for the mystery that has pertained to its history and treatment. There are other diseases of the brain, as apoplexies, paralyses, meningitis, etc., any of which *may* affect or impair the intellect. Natural death is where the physical machinery wears out; the morbid processes which we call disease may destroy the body and anticipate natural death. But these conditions are not self-developed, nor are they slumbering elements in the body. They come from external causes connected with life and its activities; the habits, the exposures, the vices, the accidents, the over-toil, the starvation, the excesses, the exhaustions—these and kindred causes induce physiological disturbances and set up the morbid processes which we call disease, and insanity is merely one of them, and, as we have said, one that is largely preventable.

Suicide is set down as among the tendencies inherited and,

* Bucknill and Tuke, page 250.

according to one writer already quoted, it "propagates itself." It would seem impossible to conceive of the impregnation of an ovum with a predisposition to self-destruction. Suicide arises, not from impulse, or fatal inbred proclivity, but from illogical reasoning regarding the value of life, or a false personal estimate of its good and evil, by those who are brought face to face with trouble. The suicidal thought comes to many when their experience reaches a point which leads them to ask, "is life worth living?" to others when they are brought to the verge of exposures in which their characters would suffer from their criminal conduct, to others when unjust accusations and slander come upon them and they stop to ask themselves the question if they can stand up against them; to others from mortification, disappointment and disaster, where their pride and self-love are deeply wounded. Again, it comes to others when owing to failure of health, they have delusional ideas of coming or present disaster to property, to family or reputation, or where under delusional ideas of their spiritual condition, they seek death as a relief from what they believe they cannot endure; or because of the delusive idea that self-destruction is a command of their Maker to save themselves or to save others. Again, suicide is in a large number of cases simply imitation and morbid desire of notoriety, as in the instances of throwing one's self from dizzy heights of bridges, or towers, or precipices, or in other like ways; or it comes from the fatal notion that because some relative has committed suicide they are doomed to the same thing, and this is one of the evils, and one of the greatest evils, aided, if not countenanced, by this theory of inheritance.

Some years ago a person came from a distant part of the State in company with his wife to consult me in regard to his mental condition, he being in dread of suicide. He stated that his grandfather, uncle, father, one brother, older than he, had committed suicide at a certain period of life. He had reached that period and was in constant dread of the same fate overtaking him. He was an intelligent man; I explained the matter fully to him, pointed out the fallacy of such views, and though he was satisfied he remained until the time had passed, then appreciated the subject and went home. I saw him several years afterwards in excellent health, and he said he had instructed his younger brothers and felt safe in regard to his children.

Careful examination of some thousands of suicidal cases reveals no instances beyond the classes I have cited. While writing I have a letter from a young man who some time ago attempted suicide. He gives this reason: "Unfortunately I became diseased. I applied to a physician and under treatment I was finally pronounced cured. Speaking with another physician upon the subject, he suggested that to be certain of cure I

had better continue treatment, and he gave me a bottle of medicine. Revolving the matter over I thought 'perhaps I am permanently diseased; there seems to be no security.' After suffering a few days under this idea, I took the whole poisonous contents of the bottle, and came near destroying myself, simply to avoid the consequences of a revelation of my conduct."

Suicide is repugnant to nature, and is in direct violation of the inherent law of self-preservation. It is condemned by both divine and human law. To dignify and excuse such an act by the plea of heredity is to play tricks with the common sense of mankind.

The question of inherited mental and moral traits is quite another field, and evidently outside of the range of disease. It is complicated and interwoven with the environment of the child from its birth; its domestic surroundings and the example of its parents from infancy, both through their own lives and the lives of their associates; in a word, the educational influences in the widest sense of the term. To this field belongs the so-called heredity of crime and intemperance. These vices and criminal lives are simply the outgrowth of education, example, appetites and passions, and do not proceed from any inherited tendency.

Intemperance is set down as hereditary. Intemperance is not disease, however potent it may be in producing disease. Intemperance is simply vice. Few men of experience in the world but can recall families of drunkards. So we may recall families of smokers; it would be logical to apply to this habit the doctrine of heredity in the form of an inherited tendency as it would be to the liquor habit.

In the plea of insanity for criminal acts, heredity, has, perhaps, figured more conspicuously than any other element or agency in defense of crime. It has been held up as a sort of underlying mal-influence, inherent in the very constitution, liable at any moment to break out; a general larvated state of body and mind, the "latent diathesis" liable to develop at any time; and this has too often been made to serve as a reason for the *possible* existence of insanity in any particular case. Heredity is stongly urged in what are called cases of moral insanity. According to its advocates a sort of moral scrofula pervades the emotional nature, dominating the sentiments and perverting or obliterating the moral sense. It is even claimed that the individual, under these circumstances, is unconscious of this state of things; that his intellectual nature is not involved, but he does not recognize the "nature and quality of his acts," and of course "cannot know that they are wrong." This plea has been urged in all kinds of cases and for a great variety of criminal acts, such as book stealing by ministers, pilfering by school girls and boys, shoplifting by women of respectability, or in cases of reputable per-

sons shooting under jealousy and revenge persons who have despoiled their domestic life, or against whom they have grudges, real or imaginary. Incendiarism, burglary, and even forgery have come under this category. In many of these cases the parents have not only not been insane but have led exemplary lives, and heredity cannot be predicated.

Professor Arndt* shows where the logic of such views may lead: "Morals and a sound psychical life," he says, "are inseparable. All immorality is a symptom of psychical disease," and declares "no person of sound mind ever commits a crime." Again—"each criminal is a diseased human being."

Even Dr. Clouston, in his able and interesting "Clinical Lectures on Mental Disease," recently published, seems (I am sorry to say) to embrace all those artificial classifications of the various forms of what he would call "Monomania" and "Moral Insanity." In his description of the origin of monomania he thus states the first out of four different ways in which he claims it arises. "It is a gradual evolution out of a natural disposition, a proud man becoming insanely and delusionally proud, a naturally suspicious man passing the sane borderland with his suspicions. There is usually a hereditary predisposition to insanity in those patients. The disposition may, in fact, be regarded as the nervous diathesis out of which the mental disease springs." (Page 201).

It seems to be impossible to put scientific and intelligibly consistent meaning into such language as this. What is a gradual evolution out of a natural disposition in any physiological sense? How does a proud man become "insanely and delusionally proud" without the physical changes that imply the disease of the brain? For this is what he seems to insinuate when he says: "The (natural) disposition may, in fact, be regarded as the nervous diathesis out of which the mental disease springs." He clings to the term "mental disease" with a tenacity worthy of the old days when insanity was regarded as an actual disease of the mind. But if pride and suspicion and other unamiable traits are a "nervous diathesis," evolving into insanity, who is safe, and how are we to account for so large a proportion of cases in which the insanity first exhibits these traits preceded by no such "nervous diathesis?" How can a "disease" in any scientific sense spring out of a natural disposition, under the name of a "nervous diathesis?"

This "insane diathesis," or "insane temperament," as he elsewhere calls it, for illustration of which he refers us to the "works of the modern psychological novelist," he differentiates from the German *Primäre Verrücktheit*, (or imbecility,) by saying that "the latter is an insanity naturally evolved in early life from the original constitution of a brain which may have been at first without peculiarity, but gradually and inevitably

*"Lehrbuch der Psychiatrie," Rud. Arndt, 1883.

and without any other cause than its own natural evolution, an unsound state of mind is developed without the preliminary explosion of brain storm in the shape of an attack of mania or melancholia." (Page 259). Perhaps, however, the latter is not more fanciful than the former. It has not even been proved as yet that idiocy is any such evolution from hereditary "diathesis;" and what the words "gradually, inevitably and without any other cause than its own natural evolution," can really signify, other than a metaphysical speculation of the author, it would be difficult even to conjecture. The German writers on this subject exhibit a wonderful cleverness and ingenuity in word manipulation; but one of their number, conspicuous for cleverness and ability, Professor Arndt,* gives us a clue out of the labyrinth of *Primäre Verrücktheit* when he says: "If a state of psychical debility is unmistakably manifest already during the evolution of physical life or as commonly expressed, is congenital, it is called "congenital dementia" or "idiotism." Here then, we are brought face to face with an entirely different department, that of congenital defects, malformations or arrested physical development which are not classed in the category of active disease, and which, at least, have nothing to do with the positive access of the disease called insanity. A congenital defect, structural or otherwise, does not necessarily connote a morbid process. Hence the hospital practice of our day does not attempt to include the idiots and the insane under one system of care and treatment; that of idiocy being chiefly directed to such development of its subjects as is attainable by education and training—a school system with physical training. Insanity is always an acute or supervening disease, however speedily its character may become fixed, and it always has for its origin a definite point of departure. Natural defects may enter into medico-legal questions of personal responsibility, but it is not because they have any medical or pathological connection with the active or acquired disease of insanity.

In many such cases medical men have volunteered to appear before courts, and in other cases have been dragged in, to make medical science sustain such doctrines and modes of defense. Writers have endeavored to draw distinctive lines between ordinary wickedness and this "moral criminal state" by calling stealing "kleptomania," incendiarism "pyromania," murder "homicidal mania," drunkenness "dipsomania," etc., In all such cases the insanity of a relative is a most precious boon, as affording an avenue of escape, for heredity gives them the "constitutional basis for the perverted moral state." The history of cases in which such pleas have been entered and pressed would show that they have not been resorted to to shield only the weak-minded, the "half-witted," the natural born incompetents and unfortunates who really stand on the

*"Lehrbuch der Psychiatrie," Rud. Arndt, 1883.

border line of imbecility, and approximate idiocy in their sense of responsibility. But history shows that it is the voluntarily bad, who happen to have the means and friends to defend them, for whom this plea is raised; indeed the very infamy of their lives is paraded as evidence of insanity. It is an attempted stigma on the medical profession to boast "that doctors can always be found to expert such cases for a fee." It is perhaps true that in some cases doctors have gone on the stand for a fee, but in most cases they go on the stand really believing in such views of insanity, and supposing that it is possible to have the moral half of a man insane and the intellectual half sound; and so have given the most absurd testimony in good faith.

Still, it is equally true that lawyers are to be found for a fee to defeat justice and turn criminals loose on society. The answer of course is that it is the business of lawyers to work for a fee and make the worse appear the better reason. All that can be said on this subject is that lawyers and doctors are men, and men have their own "moral tone." From the standpoint of good morals, it is doubtful whether the lawyer who uses a false plea for a fee is any better than the doctor who sustains it for a fee. If life is simply a game of cards as has been said, cheating is only reprehensible when found out. On this subject an able attorney once said in my hearing in a court room, "Science has no morals; it consists of facts and laws." "Yes," replied the judge, "but he who prostitutes science is himself a criminal."

Heredity, I said at the outset, is an indisputable fact in nature. It is implied in the very words, "genera" "and species," according to which every organism is originated "after its kind." Nothing I have said questions or militates against the fact of the transmission of race types and characteristics of family, or tribal, or national traits. The hopes and destinies of modern civilization itself are in a measure wrapped up in the noble potentialities which a beneficent Creator has imbedded in the constitution of human nature, which it is the probation of mankind to develop through successive generations. What I wish to combat is the notion of the direct transmissibility of disease, as such; the monstrous figment of scientific pessimism, that the abnormalities and lesions of the human organism can acquire any such persistent and stable character as its own *vivida vis* itself, that nature puts a destructive force on an even race with the constructive in any of her operations; an idea which ought to be contrary to any philosophic system of evolution itself. It is a law of all organisms to reject whatever is foreign to its own normal condition. If all that is claimed for "morbid heredity" be true, it would be a cumulative process which must eventually swamp the vital energies of the world. It seems philosophically absurd to assume

that a force, opposed to organic life, can so seat itself in the constitution of an organism as to perpetuate itself by that organism's generating power. Nature rejects or eliminates the taint of death. No sooner do the decaying elements enter the earth than they are transformed into life-giving agents and "that which is corruptable puts on incorruption."

The earth itself, is not more surely the purifier of all corruption, than the stream of human vitality which shows its recuperative tendency to cast out and eliminate the elements that are hostile to its own existence and welfare. It is a benevolent principle impressed upon the natural world, which, like its own indefinable beauty, appeals only to a being of god-like reason and imagination, and inspires the wistful hope of the poet—

"That somehow good
Will be the final goal of ill,
To pangs of nature, sins of will,
Defects of doubt, and taints of blood."
—Tennyson—*In Mem.*

PALATABLE PRESCRIPTIONS.

In the *Cincinnati Lancet and Clinic*, May 8, 1884, Dr. John L. Davis has an interesting and practical article upon this subject, from which we take the following:

A few drugs of each class will suffice to illustrate how the whole class may be improved.

(1) *Bitter Drugs*.—These comprise a very large class of unpalatable medicines, the climax of bitterness being reached in cinchona bark. The best prescription for masking the taste of quinine is

R. Quiniae sulphatis.....	gr. xxx.
Tincture aurant. cort. recentis.....	ʒij.
Extract glycyrrhizæ fluid.....	ʒvj.
Syrup simplicis.....	ʒj.

Or it may be given with the aromatic syrup of licorice. Simply chewing a piece of licorice root before and after taking quinine will very effectually hide its bitter taste. The same methods for administration apply equally well to most other bitter medicines.

In the *American Journal of Medical Science* (1878), Dr. Samuel Ashhurst, of Philadelphia, describes an agreeable method for the exhibition of cinchonina. He uses the alkaloid rather than the more usual sulphate; for, while being equally soluble in the stomach, it is less so in the saliva, and consequently its bitterness is less marked than that of the sulphate. His prescription is:

R. Cinchoninæ	gr. j.
Sac. latis.....	gr. iv.
Natr. bicarbonates.....	gr. 1-10.

The soda renders the alkaloid less soluble in the mouth, while the sugar of milk gives it an agreeable, sweet taste. Children take this powder without the least aversion.

The thick, viscid elixir of taraxacum is also a valuable vehicle for the administration of medicines. And finally it may be said of these as of all medicines that if taken very cold, or if a piece of ice is taken into the mouth immediately before the medicine, the objectionable taste will be less marked.

(2) *Salty and Metallic Drugs*.—A large class of unpalatable drugs is included under this head. The best prescription containing iodide of potassium is the following:

R. Potassii iodidi.....	℥ij.
Tincture aurant. cort. recentis.....	℥ij.
Extract glycyrrhiz. rad. fluid.....	℥j.
Syrup simplicis.....	qs. ad. ℥iij.

Of this each teaspoonful contains five grains, and the iodide is so perfectly disguised that persons who have been accustomed to its use fail to recognize its presence. For this combination I am indebted to Mr. Julius H. Erchberg, the skillful and efficient druggist of the Cincinnati Hospital. The vehicle is eligible also for the administration of the bromide of potassium. A syrup of coffee is highly recommended to hide the taste of the iodide—fifteen grains to the ounce. The same vehicle can be used for the bromide, except in cases where the stimulant effect of the coffee is to be avoided. A simple and somewhat effective way for administering the iodide and bromide as well as salicylic acid is in milk—ten grains to the ounce. Another mode for giving these drugs is to use as a vehicle, slightly alkaline, carbonated water, either natural or artificial. This plan was proposed by Dr. Seguin (*New Remedies*, 1883, page 195).

The syrup of the iodide of iron is a useful medicine which is best given with the fluid extract of licorice root; this is preferable to the ordinary succus glycyrrhizæ.

A medicine peculiarly disagreeable to many persons from its bitter, salty taste is magnesium sulphate. The following prescription offers an elegant means for its administration:

R. Magnesii sulphatis.....	℥ij.
Acidi sulphurici.....	gtt. v.
Glycerinæ,	
Aqua.....	āā ℥j.

Half of this in a glass of water constitutes an agreeable dose of an ordinary repulsive substance. By the addition of a drop or two of mint the mixture becomes not only palatable but attractive.

(3) *Astringent Drugs*.—Tannin is the representative of a class of remedies repulsive by reason of an astringent, acrid taste. This may be materially improved by the addition of sugar of milk and aromatic powder. I have also ordered it with powdered

licorice, which materially improves the taste. Salicylic acid may be given in powder the same way. When alcohol is not objectionable the following combination will be found useful and agreeable:

R. Acidi salicylici.....	gr. viij.
Spirits vini gallici.....	℥xl.
Syrup acaciæ,	
Syrup limonis	āā ℥x.

Chloral besides having an acrid taste is burning and penetrating; and these qualities make it a most difficult substance to disguise. I have seen some alleged palatable prescriptions of this drug, in which the only thing disguised and perfectly hidden was the aromatic vehicle, the taste of the chloral being apparently re-enforced and concentrated. The best combination containing this drug is a suggestion of Mr. Erchberg. It is this:

R. Chloral hydratis.....	gr. v.
Glycerinæ.....	ʒj.

Or it may be still further improved, thus:

R. Chloral hydratis.....	gr. xx.
Glycerinæ.....	ʒij.
Extract glycyrrhiz. rad. fluid.....	ʒj.

Each drachm of which contains six and two-thirds grains of chloral. These same vehicles may be used in giving croton chloral hydrate, a remedy which is remarkably beneficial in some cases of facial neuralgia.

Another convenient and agreeable vehicle is the syrup of raspberry, a drachm of which covers the taste of three or four grains of chloral.

(4) *Ethereal Drugs*.—The syrup of raspberry is also useful to conceal the disagreeable character of sweet spirits of nitre; when taken with this syrup in soda water the drug is not tasted.

Sulphuric ether is best given on a lump of sugar; chloroform has a hot burning taste, which is best modified by an emulsion; or it may be given with a large quantity of simple elixir.

(5) *Odorous Drugs*.—A certain class of drugs are disagreeable more from odor than from taste. Such are carbolic acid and creosote, very repulsive to some persons. The unpleasant character of the former is fairly hidden by simple elixir, five grains of the acid to the ounce. The best way to give creosote is with simple elixir or syrup and Madeira wine.

Iodoform has a very objectionable odor. One method for disguising it is the addition of tannin. The compound has a less disagreeable odor than chloroform, but this improvement is made by destroying the iodoform by the formation of a different substance. Such prescriptions are, of course, improper. The offensive odor may be removed by the addition of various substances, without affecting in the slightest the physiological action of the drug. The best combination are the following:

R. Iodoformi.....	3j.
Nitro-benzol.....	gtt. iij.
R. Iodoformi.....	3j.
Ol. myristicæ.....	gtt. ij.
R. Iodoformi.....	3j.
Eucalyptol.....	gtt. iv.

All these prescriptions are excellent; the disagreeable odor is perfectly removed, while the properties of the iodoform remain unaltered. Some samples of the combination prepared two years ago show no trace of the odor of iodoform, though activity of the drug is unimpaired. The odor may be also hidden, though less effectually, by oleum (myrciæ oil of bay) and tonka bean, or its active principle cumerine.

Nitro-benzol constitutes an agreeable cover for the odor of turpentine. The following is a prescription which I have used:

R. Ol. terebinthinæ.....	℥x.
Syr. simp.,	
Mucilage acaciæ	āā ℥xxv.
Nitro-benzol.....	gtt. i.

In some cases turpentine may be best given in the form of a pill. And the same may be said of many of the resins and gums.

Asafetida is a substance which the Parisians use as a condiment, to give the food a pleasant taste. Personally I should prefer to take it in a gelatine coated pill, which is the least disagreeable method of its administration. Given in a liquid form, it is an exceedingly repulsive drug, whose odor and taste cannot be effectually covered. By the addition to the tincture of a drop or two of oil of orange, and a few drops of aromatic sulphuric acid to the dose, its nauseousness becomes slightly less obtrusive. This is somewhat preferable, if there can be no choice in repulsive things, to the ordinary emulsion, and mixtures containing licorice, tincture of orange, mint, etc.

Ipecac has a repulsive, acrid taste, even as a syrup. If, however, instead of sugar, glycerine is used in making the syrup mixture, the objectionable features are materially improved.

(6) *Oils*.—Such oils as that of copaiba are best given in capsule. But some persons are so constituted as to be unable to swallow capsules, and for such our only refuge is found in emulsions, such as that of bitter almonds flavored with an essential oil.

Castor oil is most easily given with an equal amount of glycerine, and a drop of oil of cinnamon to the ounce. The oil is not recognizable, and the mixture has only the hot, sweet taste of the glycerine, agreeably modified by cinnamon. This is the best way to give this valuable medicine to children. It is also readily taken by children when mixed with coarse brown sugar, and having the mass made firm by placing it for a few minutes on ice.—(*Berliner Klinische Wochenschrift*).

A method for its exhibition suggested by Dr. Potain (*Le Practicien*) appears to answer the purpose. A spoonful of orange juice is poured into a cup, then the oil added, and finally another spoonful of orange juice. When swallowed, the presence of the oil is completely unrecognizable.

By far the simplest and most eligible palatable prescription containing castor oil is that made with the addition of glycerine, with or without cinnamon.

A very nauseating and unpalatable medicine is cod-liver oil. Many attempts have been made to cover its taste. One of the easiest methods for its administration is with the yellow of an egg, a drop or two of an essential oil, and half a glass of sweetened water; or it may be given with glycerine and whiskey, or glycerine and compound spirits of lavender. The oil may be much modified, and, to some tastes, improved, by the addition of ten drops of the tincture of eucalyptus globulus to the ounce.

The medicines I have mentioned are those ordinarily most difficult to administer. I have spoken of them as we have them, without attempting any other improvement than can be made by the addition of various substances. But in most instances our medicines may be made still more agreeable by concentration, and by the use of the active principle, as the alkaloids of drugs.

MISCELLANEOUS ITEMS.

DR J. M. DAcOSTA heads the list of contributors to the S. D. Gross Professorship of Pathological Anatomy with a donation of \$2,000.

OLEATE of copper in the form of ointment is very successfully used in the cure of tinea versicolor in the Philadelphia Hospital for Skin Diseases.—*Medical Bulletin*.

ALBUMINURIA OF PREGNANCY; MILK DIET.—Professor Parvin says that a strict milk diet is the best and almost certain remedy for the albuminuria of pregnancy. A recent case thus treated was delivered of twins, no convulsions occurring.

THE danger of trichinosis does not spring only from American pork imported into Germany. In Berlin, during one month there were one hundred and fifty-four pigs destroyed by order of the inspectors, as unfit for human food; fourteen of them had trichina and one hundred and forty measles.—Berlin correspondent to *British Medical Journal*.

THE *American Journal of Pharmacy* recommends the following formula for syrup of Dover's powder: Deodorized tincture of opium, eight fluid drachms; syrup of ipecac, ten drachms;

simple syrup, quantum sufficit to make seventy-five fluid drachms. Each fluid drachm contains one-half a grain each of opium and ipecac. The addition of the potassium sulphate would probably make the preparation no better.—*Louisville Medical News*.

THE following formula will be found serviceable as local anæsthetics for small operations:

R. Chloral hydrate,	
Gum camphor.....	āā ʒij.
Morphia sulph.....	ʒss.
Chloroform.....	ʒi.

M.

This is painted with a camel's hair brush over the parts to be incised, allowed to dry, and be repeated as often as is necessary in order to produce insensibility of the part.

SUGGESTIONS AS TO THE MODE OF USING THE FORCEPS.—Dr. H. Lownded deduces four rules as the result of his experience: (1) Traction should be made in the intervals instead of during the pains; (2) When traction is not being made the handles of the forceps should be allowed to lie as far apart as they will; (3) During the pains the handles should be merely gently managed, so that they may not be expelled or do hurt; (4) During the passage of the head through the vulva, the forceps should be used when necessary as a restraining power during the pains and labor completed by traction during an interval.—*British Medical Journal*.

THE purchase of medicinal preparations in "original packages" as they come from the manufacturer, is a most practical suggestion. Adopting as staple sizes, both pound and four ounce bottles, the Wm. S. Merrell Chemical Company, of Cincinnati, meet the requirements of the drug trade as well as physicians. It is now within the power of the latter to effectually check the growing evil of substitution, not only when buying office supplies but also in prescription work. Speaking of his custom of specifying by name certain manufacturers whose preparations he uses, Thad. Reamy, M. D., the experienced gynecologist of Cincinnati, says: "In my estimation a physician violates no code, either of ethics or morals, in demanding of his druggist that which he knows to be reliable instead of leaving to the latter's judgment whose preparations he shall or shall not use."

CHARLES F. BRANCH, M. D., Secretary of the Board of United States Examining Surgeons, having used McArthur's Syrup of Hypophosphites for more than a year in the treatment of con-

sumption, reports this one case in particular. In June last I was called to see a young man, age eighteen, whose mother and one brother had died from phthisis. I found him suffering from severe pleuritic pain, night-sweats, severe distressing cough, and profuse expectoration, characteristic of the first stages in phthisis, tongue coated, pulse 128 to 130, temperature 104° at night, profuse crepitus in lower half of left lung, dullness on percussion over almost entire left side, intercostal depressions marked in left mammary, extending backwards into left axillary region, no appetite, and general facial expressions of rapid emaciation, etc. I began the use of McArthur's Hopophosphite Compound, and continued it four months, using some other means for night-sweats and such other conditions as seemed to require attention. To-day the young man is about the farm doing light work, appetite excellent, no cough, no night-sweats; the wasting of lung substance is arrested, leaving dullness in left lower lung, vesicular murmur gone, but the disease is temporarily arrested at least, and he has increased his weight forty-three pounds. With care I expect to get him through the winter in good shape, and possibly a permanent recovery may ensue. I have used the syrup in five other cases during 1883 with gratifying results.

THE ENUCLEATION OF UTERINE FIBROIDS.—A recent number of the *Zeitschrift für Geburtshilfe und Gynäkologie* contains a valuable clinical paper on this subject by Dr. R. Somer, of Berlin. He points out that the advances in abdominal surgery made of late years alter very considerably the point of view from which we should regard the enucleation of fibroids. Enucleation is in many cases very difficult and attended with considerable danger, while fibroids can often be removed by abdominal section with much less risk, or made to shrink away by removal of the uterine appendages. Enucleation must, therefore, in the fistusæ be reserved for cases in which the fibroid is so situated that its removal by enucleation is easy, or in which an abdominal operation is attended with more than usual difficulty. These cases are specified as follows: (1) Fibroids of the cervix; (2) Submucous and interstitial fibroids in which the process of expulsion into the vagina has begun. In cases in which no dilation of the cervix has taken place, enucleation should be rejected as too dangerous, it being better to operate by laparotomy. In cases in which labor is obstructed by cervical fibroids, the possibility of enucleation should be the first thing considered. Dr. Somer discusses the chief difficulties and dangers encountered in the performance of enucleation, but does not throw much light upon them. This portion of his paper is rather a comparison of the experience and suggestions of different authors, than an expression of Dr. Somer's independent judgment.

NEW USES FOR THE THERMOMETER.—Dr. J. T. Welch of Keysport, New Jersey, writes: Being called to prescribe for a patient living in the hills above Keysport, who had long been afflicted with epilepsy, and whose mind was now somewhat impaired, I noticed a remarkable pallor of the countenance, and that the surface of the body was cold to the touch, so I produced a clinical thermometer to ascertain the temperature. The young man evidently looked upon it as a part of the treatment, and further impressed by the admiring awe of his relatives closed his lips upon it with as pious a care as though it had been Lyndall's prayer guage, and speedily seemed oblivious of all earthly things. So rapt was he, that when I went to withdraw the thermometer he gave a start like one rudely assailed. "How did it effect you?" queried I. "Very well, indeed," he replied; "I think it has made me feel much better," and then raising his hand with an air of benediction, he added: "It has such a quieting influence." An hour after, I visited a young domestic in another family, who was convalescing from a mild attack of typhoid fever; where the temperature had ranged from 100° to 102° for several days. While here I related the above incident to one of her employers, who laughed heartily, but the girl, with a look of scornful superiority, cried out: "Pooh! Why, I have had two at a time in my mouth, and thought nothing of it." "Why was that?" asked I. "When I was at Randall's Island." "Yes, but why?" "What were two used for?" "Because,—because," she blurted out in confusion, "My fever was so high they couldn't tell it all in one."—*Medical Record*.

HYDRAMNION IN EXTRA-UTERINE PREGNANCY.—An interesting case of this kind is reported by Dr. R. Teuffel, of Chemnitz, in a recent number of the *Archiv für Gynäkologie*. It is important as exemplifying a rare source of error in diagnosis. The patient was thirty-six, and her last child had been born fourteen years previously. Menstruation stopped in March, 1881, and the usual symptoms of pregnancy were noticed. In August, 1881, the patient suffered from severe and long-continued abdominal pain, and was medically treated for inflammation of the bowels. September 25, 1884, labor-like pains came on, with hæmorrhage, and the expulsion of a membrane, this latter being seen only by a midwife. Birth was daily expected, but did not follow, and foetal movements were still felt in October and November, after which they ceased, and the size of the belly began to slightly diminish. In 1882 the abdomen began to increase again; she felt well, and in March, 1882, menstruation re-appeared. When she came under treatment she was wasted, sleepless, suffered pain, but was not feverish; the circumference of the belly was one-hundred and sixteen centimetres (forty-six inches). It was dull, with resonance in the flanks, fluctuating, with solid masses here and there to be felt. A firm

rounded swelling occupied the pelvis, pushing the uterus upwards, forwards, and to the right. There was no œdema of the legs or other parts. The case was diagnosed as one of ovarian cyst and an exploratory puncture was made. The fluid withdrawn gave a sediment on standing in which striated muscular fibre was identified. Feverish symptoms followed the puncture with pain, diarrhoea, and vomiting, and in ten days the patient died. On autopsy the cyst was found to contain a full-term macerated child and several litres of amniotic fluid. There was neither effused blood, nor signs of peritonitis, so that the immediate cause of death remained a mystery.

NERVE SUTURE.—Records of cases of suture of nerves divided by injuries, or, at any rate, of cases in which a considerable interval has elapsed between the injury and the operation, are not as yet so numerous as to be passed by without notice. In the *Berliner Klinische Wochenschrift*, of May 26, Dr. Reger, of Potsdam, gives an account of such a case. The patient, a young man, received a severe incised wound of the outer side of the arm, which was accompanied by much hæmorrhage and by paralysis of the forearm, and the healing of which was much delayed by suppuration. Two months later, Dr. Reger saw the case and found a large scar, beneath which, in the interval between the triceps and biceps, the radial nerve-trunk could be felt. The limb, especially the fore-arm and hand, was much wasted and its muscles flabby; there was paralysis of the extensors of the hand, and pronation and supination were impossible; sensation and electric excitability of the dorsum of the hand and arm below the scar were also abolished. After a course of electrical treatment, nerve suture was determined on. The operation, which took place four months after the accident, was performed under local anæsthesia, and antiseptic measures. On dividing the scar transversely by a large incision, the peripheral end of the severed nerve was readily displayed, but the central end was less easily found, it having retracted considerably. There was a marked difference in the appearance of these portions, the central end being somewhat bulbous and rose-colored, besides sensitive to mechanical irritation; the peripheral stump, on the contrary was conical, shrivelled, pale, and unexcitable. A distance of one centimetre and a half separated these two ends, which was increased by another centimetre after the surfaces had been pared. By detaching the sheaths for a certain distance, and slightly flexing the elbow, the suture, with a curved needle and catgut, was effected. The wound was washed with carbolic solution, dressed with iodoform, a drain being made of strands of catgut; it healed by the first intention. Sensation in the fingers began to return on the third day, and slight power of movement also under electrical treatment the functions were at length wholly restored.

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ORIGINAL ARTICLES.

ON CUTANEOUS THERAPEUTICS.*

BY P. C. JENSEN, M. D., CHICAGO, ILLINOIS.

The integument retains many of its primitive characters from early embryonic life, when it dips into the interior of the body, by deep folds and involutions to be subsequently differentiated into organs for special function, thus forming the alimentary canal and associated organs, and furnishing prolongations for the formation of the spleen, kidneys, bladder and genital organs; and owing to the fact that in all instances the excretory organs consist essentially of liminary membrane, forming part of the integument of the body or its involutions; the lachrymal, salivary, pancreatic and mammary glands, are also in like manner composed of a continuation of the liminary membrane of the true skin, or mucous membrane, involuted into tubes and follicles, and the free surface of all covered with epithelial cells, demonstrate the early embryological relations of the true skin to internal organs, and the relation of many of its original characters through life, and furnishes an essential factor in the therapeutics of disease.

In cutaneous diseases as in lesions of internal organs, it is worth remembering, that much of the functions of disabled organs can be carried on by compensatory action of neighboring organs. In congestion of the kidneys, we relieve and deplete, by bringing the skin and bowels into energetic action,

*Read in August meeting of Chicago Medical Society.

and by removing the burden through these avenues, the overworked or incompetent kidneys receive rest. This principal of removing waste, eliminating by all emunctories, is essential to the best success in the treatment of diseases of the skin.

The opinions of physiologists differ much as to the power of the skin for absorption. Colin* produced absorption by mechanical action. His experiment which is often quoted, consisted in causing water impregnated with potassic cyanide to drip for five hours upon the back of a horse. The percussion thus produced caused destruction of the sebaceous matter with absorption of the cyanide, and poisoning of the animal.

About the same time experiments were made in Vienna. Long-continued immersions were tried as a new treatment for skin diseases. Patients remained in baths for weeks and months without any perceptible degree of absorption taking place, the patients continuing to experience thirst and being obliged to swallow as much liquid as had been their habit previous to being put into the baths. The small quantity of fluid which is occasionally absorbed cutaneously, is either introduced at the lines of transition between the skin and mucous membrane, or by the sebaceous and sudoriparous glands.† Bichat's‡ experiment, which is well known, proved that absorption took place when the cutaneous surface of a limb was immersed in putrid gases, and that the poisonous matter introduced into the organism was subsequently eliminated by the bowels.

According to Bartholow, the skin may be physiologically considered a colloidal septum, and the rate and degree of absorption of any medicine will depend largely on its power of diffusion. Various circumstances influence this physical property. It is known that an acid on the one side and an alkaline on the other side of the membrane are conditions most favorable to osmosis, the alkaline fluid contained in the blood-vessels always lie on the one side of the colloidal septum—the skin; but the epidermis and sebaceous matter of the skin offer more or less positive obstruction to cutaneous absorption, therefore, medical substances in aqueous solution but slowly permeate the skin to enter the circulation. Bartholow, who has made very careful and elaborate experiments, has ascertained that alkaloids dissolved in chloroform are readily transferred through the skin into the blood-vessels, and produce their characteristic phenomena, while alcoholic and aqueous solutions are either not at all or very slowly absorbed. Bartholow's observations were made with chloroform, solutions of atropia, aconitia, morphia and strychnia.

* (G. Colin: "Physiologie des Animaux Domestiques," 1873, Volume II, page 123).

† (Küss-Amory-Duval: "Physiology," page 370).

‡ (Küss: "Physiology," page 371).

It was further determined by Waller, that alcohol mixed with chloroform did not retard absorption, but alcohol alone caused an outward osmotic flow. From these observations it follows that in the application of medical substances to the skin, for the purpose of absorption, the remedy should be dissolved in chloroform and alcohol, and not in alcohol alone or in water.

With these somewhat extensive preliminary remarks I am now brought to the direct discussion of the subject announced at the beginning.

The treatment in diseases of the skin depends on their acuteness or chronicity, their stage of advancement, their complications, their idiosyncrasies, etc.

The external or local therapeutical measures used in the treatment of skin diseases must include the exclusion of air when its contact is injurious; thorough removal of diseased products and prevention of their formation. Fluid exudates, whether sanguineous, sebaceous, serous, or purulent, are to be checked or limited. The remedies used should act directly and in a controllable degree upon the disease, without injury to the surrounding healthy parts. To fulfill all these requirements numerous plans have been tried, each having its advocates. Emplastra, unguenta, tinctures, dry powders, alcoholic and ethereal solutions, chloroformic solutions, oleo-palmitates are some of the therapeutical forms in which remedial agents are used. Of the remedies employed in these different forms a long list could be cited. The most common are the oxides and other salts of the various metals, as well as various vegetable astringents, sedatives and anodynes. The more recent local remedies used are salicylic acid, goa, or araroba powder, chrysorobin, or chrysophanic acid, (valmanus, Squire) pyrogallie acid, (Garisch) and naphthol (Kposi and Ludwig).

To obviate the evil effects sometimes produced by the remedies above mentioned, and to prevent their causing severe local irritation of surrounding tissues, Fox, Pick, Selaman and Unna have proposed vehicles by which the caustic remedies could be limited to the diseased parts.

In the treatment of psoriasis patches, Tilbury Fox uses goa powder formed into paste with water and kept in position with collodion. Sesemann employs chrysophanic acid, eight grains to one drachm of collodion. Pick recommends chrysorobin gelatin of different strengths, and paints glycerine over the gelatin after its application. Unna proposes chrysophanic plaster. Mülle, the ointment of chrysophanic acid, spread on muslin.

These methods are cumbersome and difficult in their application and therefore impracticable, often producing dryness, irritation, pain and tenderness.

Dr. Kohn has obtained excellent results in chronic skin diseases with a chloroformic solution of gutta-percha as a

vehicle for chrysorobin. A solution of one part of refined gutta-percha to ten parts of chloroform forms his vehicle which he terms traumaticin (liquor gutta-percha). For this method Dr. Kohn claims the following advantages:

(1) That traumaticin forms a thinner and more delicate covering than collodion or gelatin, causing neither tension nor pain.

(2) Traumaticin is of itself a neutral covering and protective remedy. Ten per cent. solutions, even when applied to large surfaces on adults or children, have never caused irritation.

(3) Traumaticin causes more uniform pressure than collodion, glycerine or gelatin, and adapts itself better to the skin.

A long list of cases successfully treated by his method is reported in the May number of the *Therapeutical Gazette*, 1884, pages 232 and 233; *Weiner Medizinische Wochenschrift*; *Saint Louis Medical and Surgical Journal*. The cases were mostly psoriasis.

In a few cases of psoriasis, and in a number of cases of chronic obstinate eczema, which came under my treatment since 1882, I adopted the following plan of treatment:

Both local and constitutional measures were resorted to, as in most cases there was associated a debilitated constitution, rheumatic and gouty diathesis, while in others were linked dyspepsia, neurasthenia and anæmia. In the constitutional or general treatment tonics were administered to the debilitated; iodide of potassium, salicylate of soda, colchicum, etc., for rheumatic and gouty digestions; sedatives and hæmatics for the dyspeptics, neurasthenic and anæmic cases. In each case eliminants formed a prominent part in the treatment, both for the removal of waste products and for their derivative depletory effects. The class of remedies made use of in the constitutional treatment were alteratives, hepatic stimulants, cathartics, diuretics and diaphoretics. In the local treatment after removal of crusts, scabs, etc., and having thoroughly washed the skin, an alkaline lotion was applied, the result of which was to cleanse the skin perfectly, removing adherent excretions and causing saponification of the sebaceous material, and inducing an alkaline reaction to favor osmosis and absorption. The composition of the alkaline wash was as follows:

R. Sodæ bicarbonatis.....	3ss to ʒi.
Liq. potassii hydratis.....	gr. xx to ʒss.
Aquæ puræ.....	Oj.

M. S. Apply thoroughly at night.

I have used both unguents and liquid mixtures, and success was obtained with both methods. In all instances I endeavor to give an acid reaction to the substance to be applied. The following ointments have answered admirably:

- R. Pulv. camphoræ..... ʒss to ʒi.
 Chloroform..... q. s. ft. sol.
 Acidi chrysophanici..... gr. xx.
 Pulv. opii..... ʒss to ʒii.
 Cosmolinae..... ʒi.
 M. Sig. Apply after alkaline lotion with friction.
- R. Pulv. camphoræ..... ʒi.
 Chloroform..... q. s. ft. sol.
 Acidi tannici..... gr. xx.
 Pulv. opii..... ʒss.
 Cosmolinae..... ʒi.
 M. Sig. As above.

I have used chloroformic solutions for over a year, and as they are clean and efficient, quickly manifesting the action of their ingredient, I have been disposed to favor their use. Thus—

- R. Camphoræ..... ʒij.
 Acidi chrysophanici..... ʒss.
 Tr. opii..... ʒss.
 Chloroform..... ʒss.
 Alcohol..... q. s. ad. ʒij.
 M. Sig. Apply with a soft sponge.
- or,
- R. Camphoræ..... ʒij.
 Acidi carbolicæ..... ʒss.
 Tr. opii..... ʒss.
 Chloroform..... ʒij.
 Spts. vini rect. q. s. ad. ʒij.
 M. S. Apply with a soft sponge at night after bathing with the alkaline lotion.

Since I have read Kohn's experiments I have tried the liquid of gutta-percha as a vehicle for chrysorobin, tannic and carbolic acids, and find it very efficient in forming an impermeable covering under which the healing process goes on nicely.

For the relief of gouty, rheumatic and neuralgic pain, I have seen marked and often instantaneous relief follow, the application of liniments of an acid reaction, preceded by an alkaline lotion. For instance, in neuralgia of the fifth nerve, the following formula acts charmingly:

- R. Menthol..... ʒi.
 Morphine sulphatis..... gr. iij.
 Tr. aconiti radix..... ʒij. to ʒiij.
 Chloroform..... ʒiii.
 Spts. camphoræ..... ʒij.
 Acidi phosphorici dil..... gtt. xx.
 M. S. Apply locally.

In neuralgia, which is symptomatic of some pathological condition, the cause should be sought for and removed if possible, in order to establish a permanent cure.

The preliminary part of my paper is simply to demonstrate:
 (1) That several organs may, by compulsory action, carry on the function of a disabled organ.

(2) The necessity of strict attention to elimination by all the excretory organs.

(3) Thorough cleanliness and alkalization of the skin before applying a medicant to the skin whose reaction is acid, by these means promoting diffusibility and absorption.

(4) The importance of conjoined constitutional treatment.

CONTRIBUTION TO THE LITERATURE OF PLACENTA PRÆVIA,
WITH A HISTORY OF EIGHT CASES.*

BY E. P. CHRISTIAN, A. M., M. D., WYANDOTTE, MICHIGAN.

The infrequency of this accident of parturition as compared with others of the dangerous complications, and the dismal records of its literature are reasons sufficient for any physician, having had a considerable recorded experience with such cases, for giving their histories and results to the profession.

Even though the results of one's experience may not differ from the average, and though he may have no new suggestions to offer as regards their management, yet the recorded histories of their individual peculiarities, indications, and results serve to increase the rather meagre statistics, on which, as yet, theories and conclusions are based; and will help to increase that large mass of recorded facts upon which more reliable conclusions may be built in the future. Fortunate for the parturients is it that the danger of exposure to this accident is so little; but unfortunate for obstetric science that its comparative rarity affords any one individual so limited experience from which to generalize. This infrequency arises, as I suppose, not merely from its being an unnatural condition, the sequence of conception occurring in an abnormal state or condition of the uterus, or from accidental violence to the mother, disturbing the ovum at an early period of intra-uterine existence. If this were the sole cause of its infrequency, we might expect the accident of placenta prævia to be of even much more frequent occurrence than it is. But I suppose the principal cause of this infrequency to be in that beneficent provision against the fearful hazards which the mother is subjected to in child-birth at full term with placenta prævia, the natural tendency of this condition to terminate in an early abortion.

This condition I believe to be a frequent cause of early abortions, often sufficient of itself, oftener perhaps requiring only the slightest accidental violence superadded, to induce the abortive process; which latter accident is invariably alleged as the cause. That the condition of presenting placenta has

*Delivered at the annual meeting of the Michigan State Medical Society, held at Grand Rapids, June 11 and 12, 1884. This paper was published in the *New York Medical Record*, July 26, 1884, without the knowledge or consent of its author or any member of the society, the paper having been lent that an abstract might be made of it.

existed in numerous cases of early abortion, others as well as myself must have observed; besides which it is not the improbable cause of the destruction of the embryo in many cases of retained blighted fœtuses; and when the patient, either by suffering of nature or by the aid of medical art has advanced to later stages of pregnancy, the tendency to miscarriage still continues, as is evidenced by the prematurity of so many labors after the stage of viability of the child has been reached; and when the danger of an early abortion has been surmounted, the woman has escaped that accident only to become exposed to increasing dangers at parturition, in proportion to the stage of advancement toward full term. As this condition—placenta prævia—is a frequent cause of abortion, so is the reverse equally true, that frequent abortions are a cause of placenta prævia, or of the condition of the uterus which predisposes to that accident. I suppose there is no more common cause of a sub-involuted, an enlarged and patulous uterus than frequent abortions. Such an organ, with its relaxed and unopposed walls fails to retain the ovum at its fundus on its arrival and entrance from the fallopian tube, which, falling by gravity, or being washed down by menstrual secretions, or being displaced by slight jars or other violence, reaches the lower portion of the uterus, there to form its attachment.

As I have stated, the literature of placenta prævia presents but dismal records; but the full significance of these records and the emergency of dangers in most of these cases with the necessity for prompt, energetic and efficient measures, is only realized by some considerable personal experience.

During the past year there have appeared in the medical journals a number of contributions to the literature of the subject, exhibiting better results, so far at least as fatality to the mother is concerned, than we are warranted in concluding as the average, from the statistics of text-book authorities. Perhaps this may be because the more favorable exhibits are most likely to reach the light of publication. I shall make reference to such of this recent literature as has come under my observation; of the statistical results for comparison's sake, as well as for the sake of the conclusions and deductions which some of the writers have formulated.

As to the general average of fatality in placenta prævia, Churchill states (edition of 1860): "In placenta prævia, under ordinary management, one in three, or thereabouts, of the mothers are lost, and more than half of the children." This statement has been criticised as exaggerated. If it represents the rate of fatality of all cases occurring, the unpublished as well as the published, it is probably not an exaggerated estimate. In fact, as regards the rate of fatality to children, it probably does not represent that sufficiently high, even under skillful management.

T. Carter Smith, M. D., of Aurora, Indiana, in a paper published in the *Medical and Surgical Reporter*, of Philadelphia, July 14, 1883, states that Dr. E. W. King, of New Albany, Indiana, has gathered two hundred and fifty cases occurring in the practice of physicians of that state. "Of that number there was a loss of fifty-five mothers, or twenty-two and one-half per cent. The mortality among children was one hundred and thirty-five, or over fifty-seven per cent." These figures would give a loss of mothers of one in four and four-tenths. "Of three hundred and thirty-two cases collected by Schwartz, there was one death in three and eighty-six hundredths." "Simpson states a mortality of one in three and six-tenths." "Trask (Prize Essay) one in three and ninety-five hundredths." Dr. Smith, author of the paper, gives a history of three cases in his practice, one of which was of central implantation—delivery by version. All the mothers were saved, and two of the children. Dr. Smith remarks: "It is an unhappy fact that a larger proportion of cases of placenta prævia give mal-presentations than where the placenta is otherwise normally attached, and hence version is often a necessary procedure and is often the cause of a fatal issue."

In Dr. Simpson's tables a large number, twenty-three in ninety-one, or about twenty-five per cent., were cases of mal-presentation of fœtus, as of shoulder, arm, or hand, and head. This fact, besides its bearing on the rate of fatality, has a further interest to us in the hint it gives us of the cause of this accident—placenta prævia—to which we have made reference, and to which we shall do so more emphatically further on.

D. C. Davis, M. D., of Columbus, Wisconsin, read a paper on this subject before the Wisconsin State Medical Society, published in the *Journal of the American Medical Association*, September 15, 1883, in which he records the exceptional experience of having met with seventeen cases of placenta prævia in sixteen years of practice. He had saved all the mothers, and but one child. He gives a brief history of two cases in succession of centrally implanted placenta, terminated by perforation and turning, and formulates the following conclusion emphasized in italics: "*That without doubt, rapid perforation, version, and delivery offers the easiest, speediest, and safest chance of life to the child and safety to the mother of any manner or mode of management heretofore advocated and known to me.*"

He also makes the following statement of a fact, noted also by others, and so decidedly corroborated by my own experience, without an exceptional instance, and a truth of such import and relevancy, that I consider it worthy of special emphasis: "Another fact in favor of this mode of procedure is the dilatibility of the os and cervix in cases of placenta prævia hæmorrhage, for I know whereof I speak when I aver that the uterus, from loss of blood in these cases, is rendered more pas-

sive and dilatable, and consequently version is more easy of accomplishment than in any other mal-presentation."

What is the significance of this passivity of the uterus and dilatability of the os and cervix, so different from the usual condition in normal labors or in those complicated with only abnormal presentation of the foetus, but another illustration of a law of adaption and compensatory provision for the safety of the mother through the very sequences of the abnormal condition or accident which has exposed her to such dangers? By reason of the prostration from the hæmorrhage, the parts have become relaxed and prepared for the artificial aid and interference necessary for the safety of the mother. Her safety is thus provided for, first, as we have seen, by the tendency of these cases to an early abortion, and this we believe to be the result in the majority of cases. This failing, there is a constant tendency by reason of the very condition of the parts, to a premature labor; and this failing, or with this, the hæmorrhage, the great source of danger, prepares the parts for rapid dilation and speedier delivery.

Dr. J. K. Bartlett, chairman of Section of Obstetrics and Diseases of Women, in his report at the meeting of the American Medical Association, 1883, has the following on this subject: "The report of Mr. Hoffmire, of Berlin, on this subject, deserves notice from its unusually favorable results. He cites forty-six cases. Of these, three were so near death when seen that there was no opportunity for treatment. Of the remaining forty-three, six were treated by the waiting method and the tampon. In the other thirty-seven no tampon was used. Of the six treated by the tampon at an earlier date, one died, two had a long and severe illness, and four children were dead. Of the thirty-seven treated differently one mother only died and she had been treated by tampon for twenty-four hours, and the placenta was offensive when delivered." (No statement of results to children.)

With this cursory review of some the recent literature of placenta prævia as an introduction, I will now give briefly the histories of my own cases, eight in all.

Case I.—Mrs. C., American, a weak and delicate woman; seventh labor, and the subject of several abortions. No complications in previous labors at term. Commenced flowing at about seven and one-half months with frequent repetitions; controlled each time by tampon. Labor was ushered in at about full term by exhausting flooding. Placenta implanted centrally, and was expelled in advance of the child's head, which was immediately afterwards seized and delivered by forceps. The child presented evidences of having been dead for some time by reason of commencing decomposition. The woman had a slow, tedious recovery. This, my first case of placenta prævia, occurring at an early period of practice, was the

worst case of the kind I have ever had. With present knowledge and experience, in a similar case, I should perforate, turn and deliver by feet. This management, however, as was shown after delivery, would have made no difference as far as the child was concerned; but it would have terminated the labor more rapidly and have saved the woman considerable blood.

Case II.—Mrs. S., English; ninth labor. Profuse and exhausting loss of blood came on at about 2 P. M., which was soon controlled; woman near expected time of confinement. Labor set in at 8 P. M., with renewal of flooding. Examination showed marginal attachments of placenta; head rapidly advancing and soon checking hæmorrhage by compression of bleeding mouths. Child soon born, placenta coming away immediately after. No interference necessary to hasten labor and woman quickly recovered. The child was dead.

Case III.—Mrs. H., Irish; first labor. Flowing at frequent intervals for past month. Labor pains since early morning with hæmorrhage, and at 9 P. M. only did I see her, when I was sent for on account of profuse flooding, as at this time just readily admitting two fingers which discovered marginal attachment of placenta. Os soft and dilatable, and woman badly exhausted. I dilated rapidly and easily with my hand, turned readily and delivered speedily. Child dead and decomposing; mother had felt no motion for five days previous; she rapidly recovered.

Case IV.—Canadian French; sixth labor. I was called to the patient on account of severe flooding. She was expecting soon to be confined, but did not think she was yet in labor, as she had felt no pains. Examination showed os already well dilated, head presenting and a marginal attachment of placenta, contractions from excessive loss of blood, feeble and inert and insufficient to engage the head and press it down with sufficient force to check the hæmorrhage. I applied the forceps at once, and readily and speedily delivered the patient of a large and living boy. A slight incident in this case shows how, without great carefulness in the application of the blades in such cases, one might meet with a possibly serious and certainly a mortifying accident, and one in regard to which I do not recollect to have seen any caution, possibly because writers so generally advise against the use of forceps in placenta prævia. Having applied the blades and making at first gentle traction for assurance of correct apposition, the woman made great complaint of a tearing sensation. I unlocked, removed and carefully re-applied them with no further complaint from the patient. I doubtless had grasped a part of the membranes of the partially loosened and displaced placenta, between the blade and the head. Patient made a speedy recovery.

Case V.—Mrs. G. B., Canadian French. I was called to this patient some distance in the country, on account of great loss

of blood, the woman being in eighth month of pregnancy and not yet expecting labor. Examination showed os dilated to admit finger, and totally excluded by a centrally implanted placenta; os soft and dilatable, pains inert and woman dangerously exhausted for so unadvanced a stage of labor. I gave ergot, and at the same time commenced manual dilatation, and as soon as practicable having effected separation of placenta on one side, succeeded in reaching and rupturing the bag of waters, This, with the ensuing and increasing ergotic action, brought down the head against the bleeding surface, checking the hæmorrhage; the child was soon born, the placenta having become totally detached by the advancing head coming before it. The child was dead but mother made a speedy and uninterrupted recovery.

Case VI.—Mrs. J., Canadian; seventh labor. Threatened abortion at fourth month, with hæmorrhage; again at fifth in increased quantity; recurring attacks in increasing and alarming frequency up to the seventh month, when indications of labor set in; slight, so far as pains were manifested, but with such a fearful sanguine torrent that it was considered absolutely necessary to terminate labor as speedily as art could accomplish it to afford the woman a chance for her life. Examination showed os already considerably dilated, which had been the cause of the continuous and fearful losses, also soft and dilatable, and totally occluded by the presenting placenta. I gave ergot liberally while accomplishing rapid manual dilatation, detached placenta, performed version, and delivered a dead boy, but saved the woman with a slow and tedious convalescence.

Case VII.—Mrs. C. S., German; fifth labor. Posterior marginal implantation of placenta with presentation of left arm and a prolapsed funis. Patient attended by a midwife, who sent for me on account of the mal-presentation, and severe hæmorrhage since the commencement of labor, which was at full term. The os was already sufficiently dilated on my arrival for immediate assistance which I proceeded to render by turning the child and delivering by the feet, which was readily accomplished and the woman delivered of a dead boy. She speedily recovered.

Case VIII.—Mrs. G., German; mother of two children born at full term; the subject of frequent abortions accompanied with severe hæmorrhages. This case was peculiar, if not unique. It was a miscarriage at the sixth month, and unaccompanied or preceded by hæmorrhage until after perforation of placenta, and then comparatively insignificant. There was a threatened abortion as usual at about the third month with discharge of water, which had continued dribbling away ever since but without hæmorrhage. Almost continuous uterine irritation with more or less intermittent pains culminated in decided labor

pains, though they were slow, feeble, and inefficient. After several hours the os having become sufficiently dilated, I determined to rupture membranes in hopes of bringing down the head and exciting more efficient pains. I had delayed giving ergot until the os was more thoroughly dilated. I succeeded in perforating what seemed extraordinary thick and tough membranes, and with a flow of blood following. From the comparatively undeveloped condition of a six months' placenta, from its being free and unattached about the os and yielding before the pressure of the finger, as well as from the previous absence of hæmorrhage, I did not suspect this to be the placenta until I had passed my hand up to feel the fœtus. In doing this I found a presenting foot which was brought down and the delivery was soon accomplished. Attention being given to the extraction of the placenta, this was found covering the os and firmly attached away from its margins. So firmly adherent was it, and so sensitive the os, that it was necessary to put the patient under chloroform to remove it. Examination showed the rent through which the child had been extracted through one border. There was quite an effusion of blood following the perforation until the child was well engaged. This case was followed by metritis and a retarded recovery. The separation of the placenta from immediately about the os had been going on slowly and gradually in this case since the discharge of the water at third month, and was doubtless accompanied by inflammatory changes in the parts sufficient to close the mouths of the exposed blood-vessels and prevent hæmorrhage. Dr. Simpson has given as one of his therapeutical deductions in regard to physiology and treatment of placenta prævia, "that inflammation of the uterine structures, particularly of the cervix, is especially likely to supervene when delivery is attended by placental presentations." This was a complication of my first case also, retarding the woman's recovery, notwithstanding her exhaustive hæmorrhages, which one might naturally suppose would have removed all engagement of the uterine vessels, but could not remove the structural changes of the inflammatory process. In that case it may possibly have been due to the tampon.

These are all the cases of placenta prævia that it has been my good, or bad, fortune to meet with in a practice extending over thirty years. Dr. Davis, of Columbus, Wisconsin, had met with seventeen cases in sixteen years of practice. He had also met with two cases of central implantation in succession. I have met with three cases in one year, and two of them, though not successive cases of labor, yet occurring within the same fortnight, all three, however, cases of marginal implantation, but accompanied with dangerous hæmorrhage; and then again have passed a period of ten years without meeting a case.

Analysis of these cases shows four of them central or com-

pletely closing the os, namely, numbers I, V, VI, and VIII, and four marginal,—numbers II, III, IV, and VII.

Two cases were delivered by forceps, one of central implantation, in which case the child showed evidences of having been dead previous to labor; the other a case of marginal attachment. The child was born alive and healthy, the os being sufficiently dilated to admit easy application of forceps on my arrival. This was the only living child in the entire eight cases. Three cases were delivered by version: one of central implantation, in which the placenta was detached for that purpose, and two of marginal attachment. One of these latter was complicated by descent of funis and an arm. One case was treated by perforation of placenta and delivery by presenting feet; one case by manual dilation and ergot only; and one requiring absolutely no interference, resulted in a speedy and easy delivery, and yet the child was born dead. In all the cases of version or of manual dilation, the os was found soft and easily dilatable, in accordance with the observation of Dr. Davis, "that the uterus, from loss of blood in these cases, is rendered more passive and dilatable, and consequently version is more easily accomplished than in any other mal-presentation." All the mothers were saved while but one child survived. But how little bearing the management of the cases during labor has had on the mortality of the infants can be seen by a consideration of the circumstances of their histories. Two of the children showed evidences from decomposition of having been dead probably for days previous to labor. In one of them no life had been felt for at least five days before. These were destroyed by the previous hæmorrhages by asphyxia, Cazeaux says, from interference with the placental circulation. One case was complicated with other mal-presentations, rendering version necessary, and in such mal-presentations alone the mortality is very great, and when superadded to placenta prævia, leaves but a hopeless chance for the safety of the infant. One was a case of premature delivery at six months, in which the child would inevitably have been lost on account of its immaturity. This would leave but four cases or fifty per cent in which the accidents or circumstances attending the labor could have affected the rate of mortality of the infants. But in addition, case II was an easy and speedy delivery, with absolutely no call for interference, and yet the child was born dead, destroyed, doubtless, by the preceding hæmorrhage only a few hours before; and again two more of the cases were premature deliveries at seven and eight months, in which cases the child, if not destroyed by the hæmorrhages, would have its chances of living correspondingly lessened by its prematurity. In cases I and V the placenta came in advance of the child which would seem to be a circumstance almost necessarily fatal to the infant and most dangerous to

the mother, as exposing the surface of the whole placental attachment. Churchill remarks in regard to these cases, "the mother is not always lost in these cases;" and again, "now it appears that these instances are not so rare as was supposed." He states that Dr. Simpson has collected one hundred and thirty cases in which the placenta was either expelled or extracted first, and that in all ten women died, or one in thirteen—and of one hundred and ten cases the infant was born dead in seventy-three, or sixty-nine per cent, and saved in thirty-three, or thirty-one per cent. Acting now on the generally recommended method of perforation of placenta and version in central implantation, this accident will be perhaps less likely to occur, and yet we venture to say that this operation will not always prevent the extrusion of the placenta in advance of the child, or at least its total separation from its attachments. I have had more than once, separation of a normally attached placenta in the operation of turning for abnormal presentation of the fœtus, and have lost the child presumably in consequence. It will be no less likely to occur when attached about the os. The one only child saved of the eight cases was by the commonly disapproved application of the forceps. No doubt their timely and opportune use was the correct thing in this case.

The summary of results from the cases given in the papers to which I have made reference, is as follows:

	Number of Cases.	Mothers Saved.	Per Cent.	Children Saved.	Per Cent.
T. C. Smith.....	3	3	100	2	67
D. C. Daws.....	17	17	100	1	6
Hoffmier.....	41	41	89		
My own.....	8	8	100	1	12.05
Total.....	69	69	97.25	4	28.35

These results, so far as any conclusions may be legitimately drawn from such meagre records, show much more favorably for the mother and contrariwise for the infant, than the results commonly given by text-books; and that while there seem to be good reasons for believing there has been an improvement in the chances of the mother, no such encouragement is warranted as regards the child; nor from a consideration of the nature and circumstances of the accident does it seem probable that any great improvement in that respect can be attained, for the following reasons:

- (1) If my cases are a fair average exhibit, from twenty-five

to thirty-three per cent of all will be destroyed by the hæmorrhages previous to labor.

(2) From Simpson's statistics, twenty-five per cent of all cases will be complicated with other mal-presentations, compromising the life of the child in a large proportion of them.

(3) From twenty-five to thirty-five per cent of all will be premature births. If, then, to these dangers we add the risks from hæmorrhage in labor, and from the artificial aids to the mother, we can understand that the risks to the child must always remain so great as to permit of their safe delivery in but a small proportion of the cases, and we may also understand why nature, in her beneficence, looking to the safety of the mothers in the great majority of cases, probably prefers the sacrifice of the embryo by an early abortion.

Another conclusion, which my own limited experience will justify so far as it goes, is that no irrefragable rule can be applicable as the best for all cases, but that each must be managed according to the circumstances and indications, but always with promptness and decision. If, on arrival, the os uteri be already well dilated, the placenta partially separated and head presenting, the application of the forceps may be the easiest, speediest, and safest mode of delivery, but in severe hæmorrhage there should be no waiting with an inert uterus, with feeble and inefficient pains, for dilatation of the os.

In conclusion, what are the causes of this accident of parturition which, despite of all proposed methods of management, continues in its fatality to children, as merciless as the execution of the Herodian edict for the slaughter of the innocents; and more merciless, destroys also a large percentage of mothers, at the same time causing lamentation and mourning in households, and anxious cares and harassing disappointment and vexatious dissatisfaction to the physician, as the results of his wisest, most energetic and conscientious efforts to bring the labor to a happy termination, not only as regards the mother, but also to save her offspring?

The condition is unphysiological, and, I should suppose, possible only to the human female, unless, perhaps, the quadrupeds may be liable to it.

Writers have particularly called attention to the fact of the frequent complication of this accident with other coincident mal-presentations. Dr. Simpson, as we have stated, gives a table of twenty-three cases of other mal-presentations in ninety-one cases of placenta prævia. This gives us a hint as regards probable causes.

Dr. T. Gaillard Thomas, in a clinical lecture on "Causes and Treatment of Abortion," published in the *New York Medical Journal*, January 26, 1884, states that "there are two great causes of abortion—first, a posterior displacement of the uterus, which interferes with a proper development of the organ; sec-

ond, syphilis." But the first is the only one which has any relevancy to our subject, and this because of the recognition by eminent authority of that condition of the uterus as being the most frequent cause of abortions which we regard as the most prolific cause of mal-positions and placenta prævia; not the posterior displacement alone however, but the cause of posterior and other displacements. For what is the cause of these displacements as a rule but the unnatural relaxation and patency with the increased bulk and weight of the uterus resulting from sub-involution? In a paper before this society, two years ago, on some mal-presentations, I stated this as the prolific cause of mal-presentations, placenta prævia, and abortions. These accidents—particularly placenta prævia and mal-presentations, occur for the most part in multiparæ or in multipregnant women; and frequent conceptions, but more especially repeated abortions, constitute the most prolific cause of unnatural relaxation and patency, and this, again, is the predisposing cause for frequent conceptions. Aborting women easily conceive, and we repeat the statement, that a relaxed uterus, with enlarged and patulous cavity, fails to arrest and detain the ovum at its fundus on its arrival in the uterus, from the fallopian tube, which is washed down by menstrual secretions, or is more easily displaced by movements of mother or by any violence or shock, and is thereby caused to form an unnatural attachment, the same conditions favoring unnatural positions in the developing and growing germ from the earliest period of its intra-uterine existence.

A CASE ILLUSTRATING THE INFLUENCE OF SYPHILIS IN TRAUMATIC INJURIES.

BY W. P. MUNN, PITTSBURGH, PENNSYLVANIA.

The following case is one of three of a similar character, which came under my observation in the surgical wards of the Western Pennsylvania Hospital in Pittsburgh. The other two were, unfortunately lost sight of before the termination of the disease. Any record of them would therefore necessarily be incomplete, and, of course, useless. This case, however, is so characteristic, and illustrates so well the influence which early syphilitic contamination may exert in acute accidental conditions that it may well be put on record.

John C., a brakeman, had the middle finger of his right hand crushed while engaged in coupling cars. The third phalanx was amputated at the time of the accident by the company's surgeon, but recovery was slow, and he was sent to the hospital for treatment. When I first saw him on the 16th of June, the finger was swollen and angry-looking, pus exuding from the cut end; extensive swelling in palm and back of hand,

and free discharge from an opening at the distal end of the metacarpal bone. Warm flaxseed poultice was applied to the whole hand, and iron and quinine prescribed to meet slight septic and malarial symptoms. Free incisions were ordered if necessary to relieve pus accumulations in hand and wrist.

June 19: Swelling has gone down except in finger. Poultice removed.

June 25: The hand has swollen considerably and it is necessary to again apply the poultice. After thorough questioning the patient finally admitted having had syphilis in early youth, confirming the suspicions entertained on account of apparent necrosis of the first phalanx. Mercury and iodide of potassium were ordered in full doses.

June 29: Slight improvement. Ten grains of the iodide four times a day. Incisions may again be necessary.

July 2: Incisions two inches in length made on palmar and dorsal surfaces of the hand. Copious discharge of offensive pus. Patient's mind has been wandering and his conversation is disconnected. During the next three weeks the case fluctuated, cerebral symptoms were present at times, and the patient's general condition grew worse.

July 26: The company's surgeon visited the hospital intending to operate and remove the finger, together with an apparently necrosed portion of the metacarpal bone. On his arrival he found the patient in bed with erysipelas in the hand and spreading up the arm. Local applications of lead wash with iron and quinine internally were followed by rapid recovery. Erysipelas disappeared in a week, and the anti-syphilitic treatment being continued was followed by a subsidence of all bad local symptoms. Patient left the hospital, cured, on the 6th of August.

MURIATE OF COCAINE IN OPHTHALMIC SURGERY.

BY C. J. LUNDY, A. M., M. D., DETROIT, MICHIGAN.

Professor of Diseases of the Eye, Ear and Throat in the Michigan College of Medicine.

Muriate of cocaine, the new local anæsthetic, is attracting much attention from medical men all over the country, although it was first heard of in this country much less than two months ago. Probably the introduction of no other agent into medical and surgical practice has excited so much interest as has muriate of cocaine. It is to be hoped that this agent will not prove to be one of the ephemera which have so frequently made their appearance in the medical horizon of late. From present indications this will prove to be a valuable agent for producing local anæsthesia previous to performing certain surgical operations. So far as I am aware it has been used much more extensively in ophthalmic surgery than elsewhere. Already, scores of oper-

ations have been performed while the parts were under its influence, and the results have, in the main, been satisfactory. Its use in many instances renders unnecessary the use of a general anæsthetic, such as chloroform or ether, but it cannot always be employed to the exclusion of these latter. It has been successfully employed in operations on the eye, the nose, the uterus, etc. I have made many experiments with it, and have used it in a number of cases previous to operating, and the results obtained have been generally uniform. I employ a four per cent. solution, and one weaker than this is not likely to give satisfaction. After two drops of this solution were dropped into the eye, and repeated every three minutes till eight drops were used, it was observed that tolerably complete anæsthesia of the parts soon followed. Applied to the mucous membrane of the mouth or nose the results were similar. It seems to paralyze sensation in all parts of the trifacial nerve with which it comes in contact. As it has been used in uterine operations, and has there produced anæsthesia, it is quite probable that all parts of the human economy are susceptible to its influence. Although it produces anæsthesia of the conjunctiva and cornea, it is thought by some that it will not anæsthetize the iris. No doubt it will be difficult to affect this tissue by muriate of cocaine, owing to the fact that it is bathed with the aqueous humor of the anterior chamber. This humor will dilute the cocaine to such an extent that it will not be likely to produce complete anæsthesia of that tissue. But that it does exert a paralyzing influence upon the iris there can be no doubt, for its effects can be observed both in operations and otherwise. As we shall see, it partially paralyzes the sphincter of the pupil, and dilates it widely. This it would not be likely to do, without also affecting its sensibility; especially so, when it paralyzes other branches of the same nerves which supply the iris.

After the use of the cocaine solution, the cornea begins to lose its sensibility within three or four minutes, and in many cases the corneal anæsthesia is complete in five minutes. However, in some cases the anæsthesia is not complete until the expiration of eight or ten minutes. The following case will illustrate its anæsthetic effect on the cornea:

A gentleman who was under treatment for an irritable and painful ulcer of the eye, and who had been treated with atropine, etc., in the morning, came several miles from an adjacent village in the afternoon, seeking relief from intense pain. Two drops of the muriate of cocaine were instilled into the eye, and this was repeated in four minutes. In less than eight minutes he was not only relieved of the pain, but the corneal ulcer could be touched with the point of a sharp instrument, without producing the slightest sensation.

The conjunctiva loses its sensibility after the use of cocaine

in six to ten minutes, and can be firmly grasped with a fixation forceps without producing pain or discomfort. When the eye is turned from side to side by the forceps the patient experiences simply a sense of motion.

The anæsthesia of the cornea and conjunctiva lasts from twenty to thirty minutes after which time sensation gradually returns. In the case of painful ulcer already referred to, the relief from pain was complete for several hours.

Its action on the pupil and on the muscle of accommodation (ciliary muscle) were observed as follows: In five or six minutes the pupil began to dilate. The dilatation increased slowly for fifteen or twenty minutes, at which time the pupil was twice the normal size. In no case did I observe that the pupil was dilated *ad maximum*. The dilatation of the pupil lasts from twelve to twenty hours according to the quantity and strength of the solution employed. At no time was the pupil wholly irresponsive to light. In twelve to fifteen minutes I observed the first signs of failure in the power of accommodation. In twenty minutes the effect on the ciliary muscle was tolerably well marked, and print which before the use of the medicine could be seen at five or six inches, could not now be seen nearer than twelve to fourteen inches. Repeated attempts to fully dilate the pupil and render it wholly irresponsive to light were not successful in my hands. Neither did I succeed in producing anything like complete paralysis of accommodation.

It will be seen that muriate of cocaine not only produces tolerably complete paralysis of sensation, but that it also impairs the motility of parts to which it is applied. Although its influence in producing motor paralysis is slight, yet it does not appear to be of such short duration as is the paralysis of sensation. While sensation is completely restored within thirty to sixty minutes in the normal eye, the power of accommodation does not return for several hours, and the pupillary sphincter does not regain its power for twenty hours.

It was observed that the parts became slightly hyperæmic soon after the use of the cocaine solution, and that they bled more freely when incised, than is usual in similar operations. From this I was led to infer that the cocaine exerted some influence over the vaso-motor nerves. This of course did not amount to anything like complete vaso-motor paralysis. It was also observed that the hyperæmia produced was of short duration—probably not lasting more than twenty to thirty minutes, after which time the parts presented a somewhat paler appearance than normal. For example, a medical student presented himself for experiment before the Wayne county medical society. The conjunctiva, both ocular and palpebral, was somewhat injected before the drug was used. For a short time (about half an hour) after its use the congestion was well marked, but later the conjunctiva was much paler than in the other eye.

I have employed cocaine muriate in a considerable number of operations upon the eye, such as extraction of cataract, enucleation, strabotomy, the removal of tarsal tumors, operations on lachrymal apparatus, etc. In most instances the patient experienced little or no pain, and where patients had any self-control the results were highly gratifying.

The use of this local anæsthetic will not prove entirely satisfactory in operating on children and persons who are extremely nervous and timid. Such persons think an operation must of necessity be attended with pain, and imagine the operation is painful whether it is or not. In one case, that of an extremely nervous boy, whose timidity was so great that the drops could be put in his eye with great difficulty, it was necessary to administer a little chloroform while operating for convergent strabismus. The right eye was bandaged while the left was being operated upon, but the bandage came off, and as soon as he could see distinctly what was being done he became uncontrollable, and it was necessary to give a little chloroform.

In one case of enucleation, I was able to do the greater part of the operation before the patient felt any pain. Had the patient not been a nervous, timid person, I think the operation could have been completed without difficulty. As it was a little chloroform was given previous to section of the optic and ciliary nerves. This patient was a bad subject for general anæsthesia, and by the use of the local anæsthetic, the necessity for, and the risk of, complete general anæsthesia were avoided. In cases of this character, muriate of cocaine will probably prove itself of great value, for while it produces a sufficient degree of anæsthesia of the part operated upon, the danger of chloroform is avoided. Even if chloroform is administered at the same time, it need not be carried to the point of complete narcosis.

In an operation for cataract the patient stated that he felt no pain whatever. The only thing of which he was cognizant was a pressure; but whether this was from the speculum between the lids, or from the pressure of the shell scoop upon the cornea in delivering the lens, I do not know.

Bowman's operation upon the lachrymal apparatus was done several times with scarcely a particle of pain. In one case the division of stricture in the nasal duct produced as much pain as that operation usually does. When I succeeded in getting any of the solution through the duct into the nose, the passage of the knife produced but little suffering. In one very nervous subject, who fainted during an operation done previously for removal of a tarsal tumor, no pain was felt when a similar operation was done after the use of the cocaine. In this case the incision was made upon the conjunctival surface of the lid. Patients who have been operated upon for strabismus say that while they feel no pain they experience a "sensation of motion," or a drawing or pulling of the eye when the

stabismus hook raises the tendon previous to the tenotomy.

In a canthoplastic operation, the pain was less severe than usual, but the operation was by no means painless. Had the skin at the outer angles of the eye been well bathed with the cocaine I doubt if the operation would have produced any considerable pain. While cocaine lessens the sensibility of the skin, it does not destroy it; therefore, for operations involving the integument it will not be valuable, unless the hypodermic injection of the drug can be done with safety. Under such circumstances it would seem that some of the minor operations might be done without producing pain.

In regard to enucleation of the eye, which is regarded as a painful operation, and one which is seldom or never done without an anæsthetic, I would suggest that a subconjunctival injection of the cocaine solution be made previous to beginning the operation. If the medicine have been previously dropped upon the conjunctiva, the passage of the hypodermic needle would scarcely be felt and sensation could thus be destroyed in all nerves likely to be severed in the operation.

How wide will be the range of usefulness of this new drug, time alone can determine. It may have objectionable features which we have not yet discovered, and like other lights it may prove to have a shadow. It will be some time before we can estimate its real value and give it its proper place in our list of useful agents. If, however, it proves to be in reality all that it seems to be, it will be an invaluable addition to the armamentarium of the ophthalmic surgeon. And its usefulness will not be confined to ophthalmic practice, for its anæsthetic power will prove advantageous in a thousand ways.

GENERAL CORRESPONDENCE.

MICHIGAN STATE BOARD OF HEALTH.

Reported for THE PHYSICIAN AND SURGEON.

The regular quarterly meeting of the Michigan State Board of Health was held at Lansing, October 7, 1884, the following members being present: Henry F. Lyster, M. D., of Detroit, J. H. Kellogg, M. D., of Battle Creek, C. V. Tyler, M. D., of Bay City, and Henry B. Baker, M. D., Secretary.

The secretary's reports of property, etc., for the fiscal year ending September 30, 1884, showed that large accessions had been made to the library by gift and exchange, and a lesser number by purchase, and that unusually large distributions of public health documents had been made during the year.

Professor R. C. Kedzie presented nine samples of drinking water taken from the public water supplies of Bay City, West

Bay City, Grand Haven, and Ludington, all of which showed large quantities of organic matter and other impurities. Professor Kedzie was granted till November 2, to complete his paper on "Potable and Culinary Waters in Michigan, with Especial reference to Contamination by Sawdust," for publication in the "Report of the Board for 1884." Dr. Kedzie, was also requested to make a special report on the use of explosive substances for heating and lighting purposes.

It was decided to hold a sanitary convention at East Saginaw in December, and a committee was appointed to confer with a local committee as to date, programme, etc.

At a request of the Board of Corrections and Charities, committees were appointed to examine and report on the sanitary condition of the State House of Correction at Ionia; and on the sanitary bearings of the use of boiler-iron for cells in jails.

The secretary continued his report on outbreaks of cheese-poisoning. Seven outbreaks in Michigan had been reported this year, in which there were one hundred and ninety cases of sickness, but no deaths. The symptoms following the eating of the cheese were very similar in all cases, consisting of pain in the stomach, cramping of muscles, coldness of extremities, and great prostration with violent retching and purging, lasting for several hours. In most cases the larger the amount of cheese eaten the more violent were the symptoms. Samples of the Lowell cheese had an acid reaction and a peculiar strong odor believed to be due to caprillic acid or caproic acid; examined with a one-tenth inch immersion objective, this cheese was found to contain the mycelium of a mold, and to be swarming with several kinds of actively moving bacteria. Samples of the cheese were sent to Dr. V. C. Vaughan of Michigan University, and to Professor T. J. Burrill of Illinois State Industrial University for further examination and experiment.

Further time was given to the committee on text-books on physiology and hygiene.

The Secretary called attention to a sanitary house-to-house inspection which had been made recently in the city of Ann Arbor. It is believed that this is the first systematic inspection of the kind ever made in this State.

A paper on typhoid fever was presented by the secretary, and was approved for publication in the annual report of this Board.

The State has been free from small-pox during the quarter.

The secretary reported the preparation, publication, and distribution of twelve-thousand copies of the document on the "Prevention and Restriction of Cholera." A similar document on cholera in its relation to railroads had also been prepared at the request of the Commissioner of Railroads, and had been printed and distributed by the Commissioner, in connection with a circular from his office to all railroad officials in Michigan.

A list of the names and addresses of the health officers of Michigan has been printed and a copy sent to each local board of health. The document on the "Restriction and Prevention of Diphtheria" has been revised with reference to new laws, and reprinted. The new compilation of the public health laws has been distributed to every health officer in the State, a class of persons who do not receive the session laws.

HENRY B. BAKER, Secretary.

ORIGINAL TRANSLATIONS.

GERMAN LITERATURE.

TRANSLATED BY J. A. BOBB, ANN ARBOR, MICHIGAN.

FATAL FORM OF PURPURA HÆMORRHAGIA OBSERVED IN A BOY THREE YEARS OLD.

BY DR. ALBRECHT, NEUCHÂTEL.

The boy was well up to the 28th of June, 1883. On that day his parents observed a red spot on the dorsal side of his left foot of the size of a two frank piece. In a very short time the spot had increased ten times in size, became black, and had spread over the first four toes. At the same time similar spots appeared on different parts of the buttocks.

When the child was brought to the hospital the next day, (June 29,) the spots had a gangrenous appearance. The epidermis had been removed by a redish, serum-like fluid which was entirely odorless. Similar spots appeared on the inner and outer sides of both thighs.

Status præsens on admission: Toes cold to the touch; face pale; indications, rachitis; large fontanel yet widely open; had only twelve teeth; epiphyses of the bones of the extremities enlarged; forehead bathed in sweat.

Medication: Extractum chinæ, one gramme, and cognac, thirty grammes.

On June 30, the child was again brought to the hospital. It was paler than on the former day and was very much emaciated. A dark-blue ecchymosis covered the entire posterior and outer sides of the upper right and left thighs. A reddish ecchymosis also appeared on the left elbow. The child died on July 1 from exhaustion. Postmortem showed anæmia, and contraction of heart, liver, and kidneys. The parents of the child are healthy. Of eight children, one died, seventeen months old, of meningitis; one of scarlatina, two of phthisis, and four are still living and are healthy. One little girl, six months old, has a nevus on the forehead.

A CONTRIBUTION TO THE THERAPEUTICS OF DIABETES INSIPIDUS.

BY DR. N. LENNIN.

Although the prognosis of diabetes insipidus is generally not unfavorable to life, yet the cases of complete cure are comparatively very few. Senator mentions the prognosis *quo ad valetudinem completam* very doubtful. Cases of fully established cures are very rare in medical literature. Whittle published a case, where diabetes insipidus was developed after diphtheritis, and was speedily cured. Senator reported several cases where the sickness lasted for several months and speedily ended with recovery.

Cures of diabetes insipidus are occasionally brought about by intercurrent diseases; sometimes, when this disease comes on during pregnancy it entirely disappears a few days after delivery; at other times when the disease is of several years standing, it discontinues at the beginning of pregnancy. As the cases of complete cure of diabetes insipidus are so rare, I will give the history of a case of a little girl eleven years old, who was cured in two months, after having the disease nine years.

The child was of a healthy family in which there was no appearances of diseases of this nature, nor nervous diseases. According to the history of her relatives, the child prospered very well, only from the time she was two years old the urine began to gradually increase, and she also had an abnormal thirst. No sickness preceded this trouble. As the years advanced the amount of urine and the thirst increased. Meanwhile, the child had scarlet fever, measles, and whooping-cough; but none of these affected the diabetes insipidus in the least.

The child was treated at its home for some time, but without success. The parents did not know what medicines were used.

When the child came to the hospital she was well developed and strong; her face was somewhat pale; her weight, twenty-one thousand three hundred grams; her skin dry; her body temperature in the axilla was on the average 36.8° centigrade. The child desired to be dressed warm. By careful examination all the organs proved themselves entirely healthy; the child was cheerful, and felt perfectly well. On microscopical examination, the fœces was found to contain eggs of *tæniæmedio-cancellatæ*. She was constantly tormented by thirst, and drank daily from nine to ten liters of water. The amount of urine was correspondingly increased, and varied from seven to eight liters daily. Condition of the urine: It was very clear; slightly acid in reaction; a scarcely perceptible yellowish

color; and had a specific gravity of 1001. Sugar and albumen were not present, likewise every morphological element was wanting.

At the beginning for several days the child was carefully watched, and was told to collect its urine, and only drink water out of a graduated beaker in order that the amount of water drank might be estimated.

Before any medication was employed the patient was freed of her *tæniæ*.

The daily amount of urine with little variation was seven thousand cubic centimeters.

On the 15th of July, about a month after the patient entered the hospital, she was given *sodii salicylas*, three times daily, later, four times daily, in doses of 0.5 grammes. This medicine was first introduced by Ebstein for the treatment of diabetes mellitus, and I myself have had many opportunities in observing its favorable action in diabetes mellitus.

In this case the daily amount of urine, at the end of five days was reduced from seven thousand cubic centimeters to five thousand cubic centimeters, and although increasing the dose, the urine could be no further diminished, and as *sodii salicylas* was no longer effective, *radix valerianæ*, in the form of an infusion, from five to one hundred grammes, was ordered to be given daily. Trousseau very strongly recommends valerian root in the treatment of diabetes insipidus. This medicine was used for twenty-three days, from the 24th of July until the 16th of August. The amount of urine fell gradually from five thousand cubic centimeters to two thousand and five hundred cubic centimeters, reducing it one-half; but during the last ten days of the use of this medicine, it remained stationary at two thousand and five hundred cubic centimeters. As valerian root could no further diminish the urine, it was ordered to be discontinued, and *secale cornutum*, in the form of an infusion, from two to one hundred grammes daily, given in its stead. *Secale cornutum* was first recommended by Tilard, afterwards by Sidney Ringer.

During this year, Tracy published three cases of diabetes insipidus which were very successfully treated with ergotin.

In our case the daily amount of urine, by the use of *secale cornutum*, was reduced from two thousand five hundred cubic centimeters to one thousand one hundred cubic centimeters, and after its discontinuance it raised from one thousand one hundred to one thousand two hundred cubic centimeters daily.

The patient remained three weeks longer at the hospital without taking any medicine and during this time the urine remained normal in amount.

The parents promised if the child had a relapse to immediately return it to the hospital, and as they have not yet done

so, it is reasonable to suppose that the child was permanently cured.*

The following is worthy of notice: The urine on reducing its amount became darker in color, its specific gravity arose to 1.010, and by all appearances it was normal.

The increase of body weight is also interesting in this case. The patient was well nourished at home, and on entering the hospital began to immediately increase in weight. By the use of *sodii salicylas*, and *radix valerianæ* the weight diminished; but by the use of *secale cornutum*, and after its discontinuance the weight rose rapidly.

On the whole, the patient, during the two months, increased three thousand seven hundred grammes in weight; the color of the face improved; the average body temperature at the end of treatment registered 37° centigrade, and she scarcely drank one-half a liter of water daily.

EDITORIAL PERISCOPE.

"CUTANEOUS THERAPEUTICS."

The paper of Dr. Paul C. Jensen, of Chicago, published in this number, shows that within the past few years real advancements have been made in the methods for the local treatment of skin diseases. Chrysophanic acid holds a prominent place among the new remedies recently introduced. Its curative influence in psoriasis is proven beyond a doubt, and Pick's method of mixing gelatin in different proportions with the acid has remedied, in a great measure, the trouble experienced in its use. But the applications of gelatin and chrysophanic acid become loose in a few days and are rubbed off. To obviate this influence, Auspitz struck upon the ingenious idea of using "traumaticine" instead of gelatin as an excipient. Auspitz's method consists in removing the scales by means of a bath and soap, and then rubbing the patches with a brush filled with a ten per cent. solution. These rubbings are repeated daily, the number of applications depending upon the severity of the disease. After a sufficient number of applications have been made, varying from two to a dozen, the infiltrations and scales disappear.

Of the two methods, M. Besnier, of Paris, gives that of Auspitz the preference, which he has modified to some extent. After the scales are removed, M. Besnier, by means of a stiff brush, rubs the patches with a chloroformic solution containing

*This child was treated in July and August, 1883, and Dr. Lunin wrote this production in June, 1884, so that the period that intervened from the time the patient left the hospital to when the above statement was made is about ten months.—TRANSLATOR.

fifteen per cent. of chrysophanic acid. The chloroform soon evaporates, leaving the patch permeated with pure chrysophanic acid. He now covers the patches with a thick layer of "trumaticine," applied with a large soft brush. For this method he claims excellent results.

COCAINE HYDROCHLORATE.

The anæsthetic properties of this new local anæsthetic for mucous surfaces was fully demonstrated on a patient before the Ophthalmological Congress at Heidelberg. Two drops of a two per cent solution of hydrochlorate of cocaine were dropped into the eye of the patient; in ten minutes sensitiveness of the conjunctiva and cornea was greatly diminished. Two more drops were then put into the eye and after the same interval of time perfect anæsthesia was produced.

Dr. Noyes, of New York, who was present at the congress communicated the results to the *New York Record*, of October 18. Great enthusiasm is shown by the ophthalmic surgeons of New York and Brooklyn over its action. The benefits to be derived from its use are incalculable. Complete anæsthesia of the most sensitive mucous membrane is produced by a few drops of a two per cent solution.

In concluding an article to the *New York Medical Journal*, October 25, Dr. Walker states: "That in five cases of sensitive throat I have been enabled not only to use the mirror, but to prick the mucous membrane with a sharp-pointed instrument, without pain and with very little 'gagging.'" The cases reported by Dr. Walker were under the service of Dr. Mittendorf, who has already made extensive experiments, and has excellent results in operations for strabismus, iridectomy, passage of sounds and corneal incisions.

Dr. J. T. Noyes of Detroit, has used the drug on his own person and has kindly furnished us, under date of October 29, his experience. A two per cent solution of muriate of cocaine made by Parke, Davis & Co., was prepared. The Doctor made repeated applications of one drop every five minutes to his right eye; in fifteen minutes there was complete anæsthesia of both conjunctiva and cornea. The pupil was dilated but the accommodation was unaffected. The application produced considerable smarting in the eye for a moment or two, which the Doctor thinks was probably owing to an excess of the acid in the preparation. The application was followed the next day by considerable inflammation, pain and tenderness, which yielded kindly to treatment.

Professor Greuning, of the New York Polyclinic, in a letter to Dr. Noyes, of Detroit, states that to date of letter, October 27, he has made seven operations under its influence, which included two cases of cataract, three iridectomies, one tenotomy

and one pterygium. He has used it to remove foreign bodies from the cornea, and in all cases the anæsthesia was complete; his patients chatted and laughed during the operations. In one case of double cataract there was anæsthesia of the iris in the second eye operated upon. The effect of the drug, from having a longer time for action, evidently reached the tissue of the iris.

The anæsthetic effect was discovered by Dr. Haller, a young man who is still pursuing his studies in Vienna. Its discovery marks a new era in the surgery of sensitive mucous membranes.

BILLROTH ON EXTIRPATION OF THE KIDNEY.

Operative interference in cases of renal calculus or other intractable conditions of the kidney is gradually becoming accepted as an orthodox surgical procedure. Recognizing this important fact, Professor Billroth has recently delivered an address on the subject of extirpation of the kidney, which will serve to establish the operation still more firmly in its position among the recent advances in abdominal surgery. Although unable to record any striking series of personal successes, he analyses with considerable minuteness the recorded results of others. Since the operation was first introduced by Simon fifteen years ago, there have been nearly one hundred and fifty such cases put upon public record. For statistical purposes, however, these are far too few to form a basis for any trustworthy conclusions. The operations themselves have varied very widely. The nature of the disease for which the operation was undertaken, and, above all, the condition of the opposite kidney, are points so vitally important in determining the issue of each case, that no general comparison of cases can as yet be profitably made. In all new operations, also, it must be remembered that many cases are unsuccessful owing to the late stage of the disease in which the radical cure is attempted. The importunities of patients clamoring for relief at any cost cannot always be disregarded, and many operations are undertaken under pressure, which would never be attempted if the unbiased judgment of the surgeon were left untrammelled.

Of one hundred and thirty-two cases of extirpation of the kidney, seventy recovered and sixty-two died. For prognostic purposes such figures are worth absolutely nothing, but at any rate, they prove that in more than half the cases it is at least possible for recovery to take place after removal of one kidney. In classifying cases for operation, a special place must be reserved for those in which the removal of the kidney is really accidental, that is, in which the tumor to be removed has been diagnosed as non-renal, or in which such a tumor has become so firmly adherent to the kidney as to necessitate removal of the whole mass. Healthy kidneys have occasionally been

removed, and sometimes successfully after injury, or for the relief of incurable urinary fistula. In one case of the latter, Professor Billroth himself operated with partial success, which, owing to the general enfeeblement of the patient's powers, was not maintained. In certain cases of floating kidney, the healthy organ has been completely removed. Of fourteen such operations, eight were successful and six unsuccessful, partly from inanition, and partly from peritonitis. Twelve of these cases were operated on through an anterior incision and two through the loin. Attempts at fixation of a movable kidney have hitherto failed, but in Professor Billroth's opinion, "we must not relax our efforts towards further search in this direction, and the devising of some new method of fixation, or by some other means to prevent the movable kidney from exercising a drag on the stomach. Perhaps one of these days a happy thought in this direction will occur to some one."

Extirpation of the diseased kidney may be undertaken for renal suppuration, hydro-nephrosis, or renal tumors. Professor Billroth himself has never performed complete removal of the kidney for renal abscess. In deciding to operate, the really important point upon which success or failure may turn, is the condition of the opposite kidney. In a few cases the establishment of a fistula and free drainage from the pelvis of a suppurating kidney may be followed by the passage of clear non-purulent urine from the bladder. There can then be no reason to doubt the health of the remaining organ. But in certain other cases, the passage of pus with the urine persists, notwithstanding such free drainage. In either case the indications are not really trustworthy, but at present no better guides can be relied upon.

Looking to all these conditions, and also to the variety of mischances to which such a procedure is liable, it must be allowed that the success of the operation in twenty-two cases out of forty is really somewhat astonishing.

With respect to nephrectomy in cases of hydro-nephrosis, it must be borne in mind that such cases have occasionally been cured without operation, and, further, that they are not of necessity fatal. The diagnosis in the first instance is beset with difficulty. "The anatomical relations of the sac of a hydro-nephrosis," says Professor Billroth, "the relation of its contents to the ureter, and the indications given by their chemical composition, in which both urea and uric acid may be entirely wanting; the diagnosis by palpation and percussion, all these are very difficult matters, and I will not go closer into them at present. Like the diagnosis of abdominal tumors in general they form but a contribution to the history of diagnostic failures, which are ever and anon demonstrating to us, *ad oculos*, the limits of our art."

Nine cases in all are recorded of the extirpation of a hydro-

nephrosis, and of these the majority were originally diagnosed as ovarian tumors. Six were completely cured, and three proved fatal.

The statistics of nephrectomy for new growths are less satisfactory. Of thirty-three operations twenty failures are recorded as against thirteen successes. "One can hardly wonder" (at these results) "when one reads with a shudder of what has been attempted in this direction. It seems to me that here at least one has gone a little too far." In two cases operated on by Billroth himself, and not hitherto published, good recovery took place. The first case, in which a large myxa-sarcoma was removed by abdominal section, and the second in which the lumbar incision was made, may be taken as type cases of the two forms of operation. Following Czerny, with his unprecedented experience of eighteen cases of nephrectomy, Billroth expresses a decided preference for the lumbar operation. Although the removal of a healthy kidney through the loin may be effected with the greatest ease in the dead subject, it is quite a different matter to remove a suppurating kidney. The most important points are the finding and properly securing of the ureter, and of the renal artery and vein.

The healing of the wound does not appear to be attended with any special risks, although abscesses may occasionally form.

Nephrectomy, by means of laparotomy, is attended with much greater risks owing to the exposure to septic infection of the peritoneal surface. The serous effusion which takes place from the edges of a fresh wound is the fluid above all others favorable for the development of all kinds of micro-organisms, and all possible means must be employed to prevent the access of this fluid to the peritoneal cavity.

Professor Billroth observes, in conclusion, that operative interference in the cavity of the abdomen can only bring relief in a certain class of cases. It is now the task of the present day to recognize and define still more clearly the class of cases in which surgical measures are of use. If we have here and there pushed the limits of surgical benevolence somewhat too widely, we may, without discredit, retract them a little as our experience extends, but at the same time fix them upon a still firmer basis.

If the surgeons of to-day will not fancy themselves to be such all-powerful fellows, but will be content to follow with modesty the example of their brethren the physicians, indefatigably investigating and combining, we may yet succeed in bringing cure, or at least temporary relief of their troubles to still more unfortunate sufferers.

This is, and always will be, the ultimate end of our common scientific and humane endeavors, and the real end and object of our noble calling.

PREVENTION OF OPHTHALMIA NEONATORUM.

One of the greatest blessing which medical art of late has conferred on mankind is the preventive treatment of blennorrhœa of the eyes of new-born children. In the October number of the *American Journal of the Medical Sciences*, Dr. Henry J. Garrigues calls attention to the value of Credé's method of treatment, which, in brief, consists in washing the outer surface of the eyelids with plain water, separating them slightly and letting a single drop of a two per cent solution of nitrate of silver fall from a glass rod on the cornea. No after-treatment is used.

In 1882, Garrigues introduced Credé's treatment into his service at the New York Maternity Hospital, since which time three hundred and fifty-one children have been thus treated and not a single one was affected. He makes this application immediately after the cord has been severed, which is not done before the pulsation in it has ceased. During the subsequent ablution great care is taken that no foreign substance enters the eyes.

The results obtained in lying-in hospitals by this method are so striking that there cannot be any doubt about the advisability, nay, the duty of adopting it in all such institutions.

CONDENSATIONS.

DR. C. C. GRAHAM, of Louisville, completed the age of one hundred years on the 10th of October last.

THE Chicago College of Pharmacy celebrated its twenty-fifth anniversary on October 13, by the opening and dedicating of its new college building.

PROFESSOR DONALD MACLEAN, of Detroit, removed, October 26, in the public amphitheater, in the presence of the medical class of the University of Michigan, a large cystic left kidney, both ovaries, and the greater portion of the great omentum, from a woman, who is thought to be in an early stage of pregnancy. From recent reports, seventeen days after the operation, we learn that the patient has nearly recovered.

THE New York State Medical Association, which represents such members of the profession in that State as have refused to be governed by the new code, will hold its first meeting at Murray Hill Hotel, Parke avenue, Fortieth and Forty-first streets, New York City, November 18, 19, and 20. The programme calls for forty papers, and represents some of the most eminent medical men of the State. Dr. Henry D. Didama, of Syracuse, is the President.

A CASE of tetanus produced by hypodermic injections is reported by Dr. Pietro Rossi, in the *Gazzetta degli Ospitali*. The patient was a youth affected with incipient pulmonary tuberculosis. Hydrochlorate of quinine was injected every other day, sometimes twice a day with much constitutional benefit, but each puncture was followed by slight local irritation. Four days after the last injection the pain increased at one of the punctures, which became red and turgid. Repeated poultices allayed these symptoms, but the patient complained of great weakness and of difficulty of moving his jaws when eating. Chloral was given freely by the month, but in a few hours all the symptoms of tetanus were developed. Chloral clysters in large doses proved unavailing. Muscular spasms of the trunk increased in frequency and violence, and death occurred suddenly thirty hours after the appearance of the first tetanic symptoms.

THE ulceration on the frænum linguæ seen in many cases of whooping-cough, is now thought to be of parasitic origin, and not due to the friction of the tongue against the teeth. M. Delthill, who advances this new theory claims that the ulcer appears several days before the violent attacks of coughing come on; that the ulceration does not always begin on the sides of the frænum, but may be formed in the vestibule of the floor of the mouth and of the upper lip. He regards the lesion contagious in character, and due to the contact of a healthy infant with an infant affected with whooping-cough. The parasite is the same as that found in the spectra of cases of pertusses. The lesion appears fourteen days after inoculation, and is accompanied with fever and vomiting. The fever disappears when the ulcer is healed but not before. From this it will appear that the disease cannot be regarded as passed off until the lesion in the mouth is healed.

NEW PUBLICATIONS.

THE PHYSICIAN'S VISITING LIST FOR 1885. Philadelphia. P. Blakiston, Son & Co. Sold by all Booksellers and Druggists.

Each year of its publication this production has new features added. For 1885 it contains an almanac; table of signs for keeping record; Marshall Hall's ready method in asphyxia; poisons and antidotes; the metric system of weights and measures; dose table, in metric and apothecaries' weights and measures, thoroughly revised and corrected, according to the new pharmacopœial standards,—the list of *drugs* is arranged alphabetically and comprises over seven hundred drugs and preparations; table for calculating the period of utero-gestation; a list

of the most important *new remedies* and a few *old* ones which have recently been revived, giving a brief description of their physiological action, diseases in which they are indicated, with dose; Sylvester's method for producing artificial respiration; plates showing position of heart and lungs; blank leaves adequate for one year's record for visiting list; monthly memoranda; addresses of patients and others; addresses of nurses with references; accounts asked for; memoranda of wants; obstetric engagements: vaccination engagements; record of births; record of deaths; general memoranda. This is the thirty-fourth year of its publication. The list truly merits the favor it has received.

INFLUENCE OF THE MIND UPON THE BODY. By Daniel Hack Tuke, M. D., F. R. C. P., LL. D., late President of the Medico-Physiological Association; Joint Author of the "Manual of Psychological Medicine," and Co-Editor of the *Journal of Mental Science*. Second American from the second English edition. One volume; Octavo—four hundred and eighty-two pages. Philadelphia: Henry C. Lea's Son & Co., 1884.

This work comes so thoroughly revised and re-written it will be reviewed with the consideration of a new publication. Since the first edition was published in 1872, there has been a more general intelligent interest shown, and a greatly increased amount of investigation, in psycho-physical principles, the results of which has enabled the author to make many additions to the list of authenticated facts, then collected for publication. The work is thus replete with incidents and remarkable cases which tend to illustrate the influence of the mind upon the various sensations, expressions and movements, and functions of the body.

From the preface of the first edition, the following objects of the work are quoted:

(1) To collect together in one volume authentic illustrations of the influence of the mind upon the body, scattered through various medical and other works, however familiar to many these cases may be, supplemented by those following within my own knowledge.

(2) To give these cases fresh interest and value by arranging them on a definite physiological basis.

(3) To show the power and extent of this influence not only in health in causing disorders of sensation, motion, and the organic functions, but also its importance as a *practical* remedy in disease. In following out these objects the author has arranged his material into three classes, as it, psychologically considered, pertains to one or the other of the three factors of the mind—the intellect, the emotion or the volition. The book is divided into four parts—Part I, being devoted to the discussion of general psychological and physiological principles of the intellect, and illustrations and arguments, showing the

influence of the intellect on sensation; upon the voluntary muscles; upon the involuntary muscles; and upon the organic functions. Part II considers the emotions, dealing in a like manner with their principles and influence. The volition is similarly dealt with in Part III.

(4) To ascertain as far as possible the channels through, and the mode by, which this influence is exerted.

(5) To elucidate by this inquiry the nature and action of what is usually understood as the imagination.

The author is very sincere in his efforts to enforce the importance of studying the application of certain psycho-physical principles which are now clearly recognized. It is the aim of the book to induce practitioners to follow nature, and learn how these occasionally sudden recoveries are produced, and then employ the psycho-therapeutical remedy designedly and scientifically.

The author's earnestness and forcible style, together with the multitude of incidents cited, to illustrate the wonderful and remarkable influence exerted by the mind over the body, make the book intensely interesting.

To any one interested in the subject of "*thought-reading*," the manifestations of "*modern spiritualism*," the scientific solution of the "*prayer cure*," and other kindred subjects, will find the work a feast of fact and reason, highly gratifying.

A TEXT-BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By John J. Reese, M. D., Professor of Medical Jurisprudence and Toxicology in the Medical and Law Departments of the University of Pennsylvania; Vice-President of the Medical Jurisprudence Society of Philadelphia; Physician to Saint Joseph's Hospital; Corresponding Member of the New York Medico-Legal Society. Demi-octavo—six hundred and six pages. Cloth, \$4.00; leather, \$5.00. P. Blakiston, Son & Co., Philadelphia.

This work has been prepared to meet the wants of practitioners and students who wish a knowledge of medical jurisprudence by presenting the essentials of the science in as condensed a manner possible consistent with clearness and completeness. The author has been for twenty years a teacher of the science, and in the Eastern and Middle States is well known as a skilled toxicologist and eminent medical jurist. The thorough character and practical nature of the work show the author's familiarity with the subject. Dr. Reese's extended practical experience in legal medicine enables him to give a proportionate prominence to the more or less practical and important topics. The whole subject is abridged and condensed to meet the demands made in the courts, of the general medical practitioner.

The subject of toxicology receives the space and attention required by so important a study. The common symptoms, fatal dose, treatment, morbid appearances, chemical analysis,

and toxicological examination are given of each mineral and vegetable poison, special attention being given to the more important.

The chapter on insanity is treated from a purely medico-legal stand-point, and gives such information as is necessary to fully inform the student of legal medicine of his true position in reference to insane persons.

The author's style is clear and pleasing, which, together with the logical arrangement of the subject matter and the full index, makes the book decidedly agreeable and readable.

BOOKS AND PAMPHLETS RECEIVED.

VISIONS OF FANCY: Poetical Work by N. M. Baskett, M. D., Saint Louis, Missouri. *Commercial Printing Company*, 1884.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND. Eighty-sixth annual session held at Baltimore, Maryland, April, 1884. *Journal Publishing Company*, Baltimore.

GENITAL REFLEXES: THE RESULT OF AN ABNORMAL PHYSICAL CONDITION OF THE GENITAL ORGANS KNOWN AS PHYNOSIS. By T. Griswold Comstock, M. A., M. D., Saint Louis, Missouri. Reprint from the *New York Medical Times*, September, 1884. E. P. Cory & Co., New York.

SURGICAL DELUSIONS AND FOLLIES: A REVISION OF THE ADDRESS IN SURGERY FOR 1884 OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA. By John B. Roberts, A. M., M. D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Surgeon to Saint Mary's Hospital, Philadelphia. P. Blakiston, Son & Co.

PROCEEDINGS AND ADDRESSES AT A SANITARY CONVENTION HELD AT HILLSDALE, MICHIGAN, APRIL 17 AND 18, 1884. Under the direction of a committee of the State Board of Health, and a committee of citizens of Hillsdale. Supplement to the Report of the Michigan State Board of Health for the year 1884. Lansing, Michigan: W. S. George & Co., State Printers and Binders.

QUIZ COMPEND: A COMPEND OF HUMAN ANATOMY. By Samuel O. L. Potter, M. A., M. D., late Acting Assistant Surgeon United States Army; author of "An Index of Comparative Therapeutics," "A Compend of Materia Medica," "A Compend of Visceral Anatomy," and of the Lea Prize Essay of Jefferson Medical College on "Dystalia—A Study of Speech and its Defects." Third edition, revised. Sixty-three illustrations. P. Blakiston, Son & Co.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By Frank Hastings Hamilton, A. B., A. M., M. D., LL. D., late Professor of Surgery in Bellevue Hospital Medical College, and Surgeon to Bellevue Hospital, New York; Consulting Surgeon to Hospital for Ruptured and Cripples to Saint Elizabeth Hospital, etc.; Author of a "Treatise on Military Surgery and Hygiene," "A Treatise on the Principles and Practice of Surgery." Seventh American edition, revised and improved. Octavo—three hundred and seventy-nine illustrations; one thousand and one pages. Philadelphia: Henry C. Lea's Son & Co.

THE EAR: ITS ANATOMY, PHYSIOLOGY, AND DISEASES. A Practical Treatise for the use of Medical Students and Practitioners. By Charles H. Burnett, A. M., M. D., Professor of Otology in the Philadelphia Polyclinic and College for Graduates in Medicine; Consulting Aurist to the Pennsylvania Institution for the Deaf and Dumb; Aural Surgeon to the Presbyterian Hospital, Philadelphia; President of the American Otological Society. Second edition, revised and re-written. One hundred and seven illustrations; three hundred and eighty-five octavo pages. Philadelphia: Henry C. Lea's, Son & Co.

LECTURES ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Nathan Smith Davis, A. M., M. D., LL. D., Dean of the Faculty of Principles and Practice of Medicine and Clinical Medicine in Chicago Medical College; Senior Physician to the Mercy Hospital, Chicago; Member and ex-President of the American Medical Association, of the Illinois State Medical Society and of the Chicago Medical Society; Member of the Illinois Microscopical Society, Chicago Academy of Sciences, American Public Health Association; Honary Member of the New York Academy of Medicine, and of the College of Physicians, Philadelphia. Octavo—eighty-seven pages. Chicago: Jansen, McClurg & Co., 1884.

MEDICAL DIGEST.

THE PATHOLOGY OF INEBRIETY.*

In considering the subject of the *pathology of inebriety*, we must look for a moment primarily at the complexity of the nervous system, its manifold functions and its extensive distribution. We have the *cerebro-spinal system*, consisting of the encephalon, the spinal cord, and the encephalic and spinal nerves, and the *organic system of nerves*, consisting of the pneumogastric or vagus nerves, and the great sympathetic system including the vaso-motor system of nerves. In inebriety the primary morbid changes are not in the nerve elements themselves or in the interstitial connective tissue of nerves, except in those who inherit a structurally degraded nervous system, but it is initiated by altered quality of blood and secondary disturbance of nerve function. The interference with the proper and well-balanced working of the nervous system in inebriety depends primarily upon the supply of blood to the different nerve centers being neither definite in amount or uniform in quality. The proper nutrition of such centers and their normal molecular mobility is at once disturbed, and the maintenance of the accustomed degree of excitability in the different nerve centers is interfered with, and we get at once an exaltation, diminution or other perverted activity of the whole nervous system. The variations taking place in the nutritive

* Read by Edward C. Mann, M. D., at the Annual Meeting of the New Jersey State Medical Society at Atlantic City, June 13, 1884.

condition of the nerve centers involve not only an altered action in that part, but a perverted functional activity of all other related parts. Thus in inebriety we get the most varied grouping of abnormal phenomena traceable to altered action in the nervous system, and having for a starting point some perverted functioning of one or more nerve centers. We have, in inebriety, morbid conditions of a progressive type ending in special forms of atrophy and degeneration, showing themselves more especially in the nerve cells of the brain, spinal cord, or sympathetic ganglia. Clinically, in the wide and varied phenomena of inebriety, we meet with perverted sensation and perception; perverted emotion and ideation; perversions of consciousness; perversions of motility; nutritive or trophic changes; perverted visceral actions. In the class of *perverted sensation* and *perception*, we have the special senses interfered with. In the class of *perverted emotion* and *ideation*, we have a long range from mere emotional display to actual insanity. In the class of *perversions of consciousness*, we see drowsiness, stupor, and coma. In the class of *perversions of motility*, we see tremors, twitchings, spasms, both tonic and clonic, and also co-ordinated spasms, as in the epileptiform attacks of inebriates, paralysis, and defective co-ordination of muscular acts. In the class of *nutritive or trophic changes*, we meet with degeneration of brain tissue itself, inflammation and congestions of the lungs, or as hæmorrhages into these organs, blanching of hair, and altered pigmentation of the skin. In the last class of *perverted visceral actions*, we see exalted activity of the stomach, intestines, bladder, and heart, and, in women, of the uterus. Inebriety is a disease caused by heredity; by defective nutrition; by emotional shocks; by physiological crises; by visceral diseases, and by structural changes in the brain very often. We may have anæmia of the brain in inebriety, with the blood in the capillaries deficient in quantity and defective in quality; we may have secondary atrophy of the brain; we may have hæmorrhage into the substance or cavities of the brain; we may have hyperæmia of the brain with increase of quantity of blood in the capillaries, with symptoms either of excitement or depression. We may have œdema of the brain with infiltration of the brain and pia mater with serum, especially when the case of inebriety is associated with Bright's disease. The cerebral substance itself is not infiltrated. In these cases we see a slow diminution of mental power and motor force. We may have softening of the brain from vascular obstruction, depending on vascular degeneration causing thrombosis, or valvular disease of the heart causing embolism. The former in inebriates is the usual form, and it is associated with chronic alcoholism and Bright's disease. There are generally the premonitory symptoms of mental deterioration, numbness, pains in the limbs and pains in the head, in the brain-softening of inebriates.

Subsequently we see mental dullness, defective perception, drowsiness, loss of memory, slight delirium, emotional attacks, headache, articulation and hand-writing bad, the delicate motor acts badly performed, and loss of physical power. Dementia may end the scene.

Inebriety is a disease exhibiting certain essential psychic and physical signs. It is a disease in which the victims are all more or less irresponsible, as are the insane. It is a disease in which the tone and power of the nerve centers are lost. There is generally, and I believe always, could we get at the true family history, an inherited neuropathic constitution; but here, as in insanity, it is in the higher classes very difficult to elicit the whole truth from the relatives. It is a disease, perhaps more than any other excepting insanity, requiring for its cure *time* and long-persistent hygienic influences to restore the normal vaso-motor condition affecting the nutrition and circulation of the brain and nerve centers.

The importance of the early recognition and the repression of inebriety in its incipient stages has thus far received very little or no attention, even at the hands of those who have written extensively on the subject.

Inebriety is a psycho-neurosis, which either attacks an intact brain, or more frequently a brain not intact but predisposed to the acquisition of inebriety by hereditary or acquired vices of conformation or nutrition.

It has an early prodromic, curable stage. The same remarks, which in my writings on insanity I have applied to that disease, apply with equal force to the disease of inebriety, that there is an early, neurasthenic, equivocal state, differing but little from perfect sanity, but which is the earliest phase of mental alienation, and if recognized by the general practitioner, and promptly treated in this incipient stage, subsequent trouble might be averted. A very careful study and comparison of the two diseases of inebriety and insanity has shown conclusively that in both alike we have early premonitory symptoms which, unrecognized and unchecked, lead or lapse into active inebriety and dipsomania upon the one side and into insanity on the other. They are grave psychical symptoms, and should lead to an early diagnosis by an intelligent physician. As I shall show presently in detail, in this early stage of inebriety we have general malaise, impaired nutrition and assimilation; muscular atonicity changing the facial expression, neuralgia is present. There is often cerebral anæmia, and there is mental depression and sleeplessness. There are profuse perspirations and a loss of the normal elasticity of the skin. There are periods of marked mental inactivity, alternating with a hyperactivity of the mental functions. There is physical and mental prostration, muscular feebleness, and mental dullness. There is, or may be, vertigo and confusion of mind also.

Inebriety to-day is a neurotic affection preceded by a distinct interval of morbid nervousness. In the American of to-day there is a greatly augmented susceptibility to the action of stimulants and narcotics. This is due to the increasing complexity of the nervous system, and to the increased complexity of life. Our brains are finer in structure, more subtle in mechanism, and also more unstable than were those of our ancestors. The conditions of modern life, acting on our complex and excitable nervous systems, cause our increased nervous diseases, prominent among which stand inebriety and insanity. Given in a certain case an inherited neuropathic constitution and dipsomania will appear on the exhibition of the slightest exciting causes. This constitutes an important feature of the disease.

Cosmical influences operate with great readiness in producing an outbreak of the disease in persons thus predisposed to it. The phenomena of nervous exhaustion which one who inherits this neuropathic constitution generally, according to my investigations in inebriety, exhibits before the actually developed disease, are certain functional disturbances of the whole bodily organism. There is a relaxation of the general muscular tone which gives rise to partial or total loss of voice, generally partial, the chest tones being weak; relaxation of the facial muscles, giving the face an enervated, spiritless appearance; relaxation of the ocular and orbital muscles, giving a tired, worn-out expression to the eye and this same relaxation of the general muscular tone may produce involuntary defecation and micturition. There is cardiac stimulation and palpitation, the palpitation being the more prominent. Irregular action of the heart better expresses this state I refer to. If you command the individual to hold out his hand and arm perfectly straight before him, with the palm downward, you will perceive that the hand trembles visibly. This is a very good test for the general relaxation of muscular tone all over the body, and a very simple one. The arm is to be held out straight from the shoulder. There is vocal tremor; trembling of the legs, especially about the knees; atony of the digestive, excretory and other organs, producing a general malaise; idiopathic fits of perspiration and rigors. There is great irritability of the cerebral cognizant centers, evinced by fright at slight causes. These persons have fears of inability to perform certain acts, and the fear of involuntary performance. It is the fear of inability to speak loudly which is at the root of the phenomena of aphonia exhibited by neurasthenics who are destined to become inebriates; to articulate clearly, which gives rise to the vocal tremor; fear of not keeping hand or head steady which makes them tremble. Respecting their cerebral actions, they are afraid of not being able to collect their thoughts; if brain workers that they shall not write or speak in eloquent language. There are

muscular twitchings, a hasty, imperfect utterance, and a quick, agitated manner. If, from this simple state of neurasthenia or nervous exhaustion, our patient passes into the graver state of hysteria or hypochondriasis, according as it is a female or a male, we shall now observe more complex phenomena, which may or may not usher in the paroxysm of dipsomania.

There will be local pain, due to visceral disease. There will be pains referred to parts not diseased, due to transference of the nerve force or vascular disturbance of nerve centers. There is diffuse hyperthesia, due to this vascular disturbance of nerve centers. There is defective functional action of viscera, due to reflex action. There are disordered muscular movements, due proximately to reflex action or vascular disturbance of nerve centers. Among the different forms of trembling occurring in the state of nervous exhaustion I omitted one peculiar feature, which is an inability to keep the head steady when walking. The head trembles only in an antero-posterior direction. In this first stage fear lest muscular and cerebral actions cannot be performed effectually prevents their proper accomplishment.

Aside from heredity, excessive sexual indulgence, loss of blood, excessive mental and muscular exertion or any painful disease may be the cause of the neurasthenia or nervous exhaustion which ends in inebriety. Excessive indulgence in tea and coffee drinking may also induce it (nervous exhaustion), owing to the overstimulation of the nerve centres by the active principles of the tea and coffee. We can tell by the tone of the tissues pretty correctly as to the state of vigor or weakness a person is in. If the brain cells are normal their function, that is, thought, is normal. Function depends upon cellular health. The heart, the spinal cord, and the brain all functionate abnormally in the neurasthenia of inebriety, and all the forms of fear of which I have spoken are the characteristics of debility of brain, due to general failure of the normal appropriating power of the brain. These morbid fears and dreads, these morbidly colored perceptions, conceptions, and misconceptions, the timidity, irresolution, irritability of manner and speech, all foreign to a healthy person, are the essential psychic signs of the neuropathic condition of inebriates. There is a decided change from the normal standard in the manners of thought, feeling, and movement of these persons. There is mental and nervous instability and irritability analogous to that seen in the neurasthenia or nervous exhaustion preceding insanity, and the very similarity stamps indelibly the kinship of the two diseases to any unprejudiced observer. The psychic symptoms in both diseases are alike the symptoms of inadequate nerve nutrition, and in the brain centers there are instability, irresolution, timidity, dread, and fear, morbid and groundless suspicions, hallucinations, and delusions, all abnormal and not found in health. Positive hallucinations and delusions appear

when the inebriety or dipsomania has become actively established.

What physician of experience has not witnessed, in the neurasthenia of the dipsomaniac and insane man alike, that change in the mental character in which irresolution has replaced former decision of character? The psychical timidity and manner are precisely the same in both diseases, and as active insanity or active dipsomania or inebriety appear well developed, all these psychical characteristics of the prodromic neurasthenia increase in degree. I would therefore insist on the existence of this neurasthenic stage of inebriety as one of the most important points in the pathology of the disease, a stage which the general practitioner should regard as the danger signal of active dipsomania not far off, although *the irresistible craving for alcohol which constitutes the morbid condition of inebriety* may not yet have been actively displayed. Now is the time to prevent the neurasthenia of inebriety from lapsing into the actively developed disease.

The constant current of electricity, as centric galvanization and cerebral electrization will do much to antagonize the symptoms of this early stage, while attention to the mental hygiene, cod-liver oil, with the phosphates, strychnia, quinine, a combination of iron, phosphorous, zinc, and strychnia, the bromide of zinc and the chloro-phosphide of arsenic, are all indicated as the circumstances and symptoms of individual cases may indicate both to combat the disease and build up and restore the shattered nervous system.

The neurasthenia of cerebral syphilis is almost an unexplored field, but I am convinced that it frequently plays an important rôle in the production of inebriety. It has a peculiar set of symptoms, consisting of deep-seated headache of great intensity, with nocturnal exacerbation and of long duration, vertigo, mental dullness, temporary disorders of the special senses, momentary impairment of the intellect, recurring paralysis, epileptiform attacks coming on after the age of twenty-one years, and muscular feebleness. These are a perfectly diagnostic set of symptoms when associated together, and I have known them more than once, in professional and business men, to be the direct cause of inebriety and also the opium habit.

If active treatment of the neurasthenic stage of inebriety is delayed, the practitioner will soon have the opportunity of studying the natural history of a case of dipsomania. If an observant man, he can see clearly this initial stage of the disease, if the case is brought to his notice, manifesting itself in the mental movements, in the voice and walk, and in the functional nerve irritability and the inertia of his patient, and this in the earliest and most curable stage of the disease. In those inheriting the neuropathic constitution the phenomena may be observed from earliest infancy, commencing with the sleepless-

ness and night terrors and emotional outbursts of early childhood, the train of morbid phenomena becoming gradually intensified as the child grows up, and becoming well marked at the age of puberty, when a disposition to recurrent mania or its analogue, recurrent fits of inebriety, may appear. These are vaso-motor neuroses with recurrent cerebral hyperæmia, the outward expression of which state may be either the development of a true periodic insanity or a periodic dipsomania, as the case may be. The intellectual centers will be involved in either case in all probability. The phosphates and cod-liver oil in the form of hydroleine should be fed to such children from earliest childhood as a religious duty, so that nature, if possible, may restore herself to the normal standard, and overstimulation of the brain in too premature education of such children be avoided with like care. If the unstable brain tissue is injured in such children by a forcing process of education, insanity or inebriety will prove surely the avenging Nemesis of such folly.

The great danger to-day to our children as Americans is, that the too great activity and susceptibility of the nervous system, by modifying the nutrition of the brain centers and stimulating their growth unduly, tends to induce brain exhaustion and brain-tissue degenerations. This is particularly true of the refined and cultivated classes, where, by premature and stimulating processes of education, an elaboration of cerebral structure is forced and the functional activity of the brain in children hastened, overstraining the brain centers at their nascent period, thereby dwarfing and weakening them, disturbing the balance of mind by seriously interfering with the natural sequence of the evolution of the brain centers, and preparing the child to fall an early victim to some of the modern nervous diseases.

Careful building up of the nervous system and a careful direction of the mode of life, and observance of the rules of mental hygiene, may, even in children who inherit the neuropathic constitution, restore functional energy, antagonize the morbid psychosis, build up the nervous centers, and induce at least a moderation, and perhaps a total diminution of the neuropathic condition that the child inherited.

Preventive medicine is a wide field for study, and by such study dipsomania and insanity are to be prevented and oftentimes stamped out.

I have endeavored to be as brief and concise as possible in these remarks on the pathology of insanity and the importance of the early recognition and the repression of inebriety in its incipient stages. The fully developed disease exhibiting the great nervous irritability and restlessness, the unnatural sensations, the uncontrollable desire for alcoholic stimulants and the disposition to frequent fits of intoxication are familiar to all

here present. The great salient point to me in the pathology of the disease—inebriety—is, there exists a departure from a healthy structure of the nervous apparatus, and that it is this abnormal condition of the centric nervous system demanding stimulants that is essentially the disease; that inebriety and dipsomania are governed by the laws which govern mental diseases generally. How far and to what degree the phenomena of inebriety are controlled by cosmical influences, such as electrical phenomena, lunar attractions, velocities and directions of winds, geological formations, elevations above the sea level, the approaches of storms, barometrical changes and temperature, are most interesting questions, for the complete elucidation of which time is yet required: the diatheses and cachexias, reflex excitability, previous diseases, traumatic causes, overstimulation of the brain in school-children, puberty, the menopause.

The question as to whether there are *any* cases in which the nerve tissue is sound and free from defect; what per cent of the higher and middle classes, as compared with the same number of the lower and laboring classes, exhibit the disease of inebriety; the effect of menstruation upon the disease, are all very interesting points in the pathology of inebriety upon which I should like to dwell, did time permit. Accumulated results of experience indicate, however, decisively, that the propensity for drink in this disease of inebriety, when under the influence of exciting causes, arouses the appetite, overcomes the will, blunts the moral sensibilities and makes everything else subservient to its demands. The will-power of the individual is overborne by the force of the disease precisely as in mental disorder; and just as the periodically insane man has free intervals of sanity, just so does the dipsomaniac have free intervals of sobriety when the irresistible craving for stimulants passes away, to return again, however, with the next paroxysm unless the proper remedial measures are applied. The great medico-legal question, and one which needs to be clearly demonstrated to the judiciary, is this: If this morbid craving for stimulants is clearly traceable to a brain condition, what is the mental responsibility of an inebriate? To me, partial responsibility in the disease of inebriety is as clearly demonstrated as any other mental condition.

The study of the pathology of inebriety would lead us, if carried out to its fullest extent, through inquiries into the physiological action of alcohol with its stage of vascular nervous excitement, the cerebro-spinal changes induced, the fall of animal temperature, the collapse of the volitional nervous centers, modification of animal function and structural degeneration. The study of the functional disease from alcohol would reveal the alcoholic dyspepsia, the sensory disturbances from alcohol, the vascular changes in the skin, alcoholic thirst, and

early systemic failure. The organic disease from alcohol would show us fatty and diseased hearts, weakened and diseased blood-vessels, alcoholic phthisis, diseases of the liver and kidneys, diseases of the eyes, insomnia and serious deteriorations of cerebral structure itself, which often ends in mental disease. The nervous diseases would reveal, aside from insanity, epilepsy, paralysis, and delirium tremens. The epilepsy which occurs in offspring, as the result of inebriety in the parents, reveals clinically epileptic idiots whose intellectual faculties have never been developed, epileptics who are imbecile or demented, epileptic maniacs who, without obvious disorder of the mind, when epileptic fits are coming on are irritable, morose, malicious, and dangerous, and sometimes perpetrate fearful crimes, and finally a class of epileptics whose intellects are not impaired. The pathology of these epilepsies would appear to depend upon failure of the proper nutrition of cerebral tissue of the foetus, so that during embryo life the brain of the infant undergoes pathological changes which induce both deficient moral power and epilepsy. The ultimate condition of mind consists in the due nutrition, growth, and renovation of the brain cells. Inebriety produces a change in the chemical composition of the cerebral cells from the standard of health, which is the foundation of organic disease, as it prevents and interrupts healthy function. Irritation, exhaustion, and depression, apoplectiform and epileptiform attacks will appear, and subsequently atrophy and induration of the brain and thickening and infiltration of the membranes. The nerve cells may also be the seat of granular degeneration. We may have chronic meningitis with impairment of memory, dullness of intellect bordering on dementia, tottering gait, hesitating, slurring speech, and other symptoms indicative of gradually progressing paralysis. Slight attacks of cerebral hæmorrhage play a very important part in the production of premature mental decay in inebriates, and they are directly due to hypertrophy of the left ventricle of the heart, chronic diseases of the kidneys, and the degenerated cerebral arteries. There is a sub-inflammatory irritation which causes the arteries to lose much of their elasticity and to become permanently wider, longer, and more tortuous. The strong left ventricle and inelastic arteries combine to prevent the wave of blood sent to the arteries from being properly equalized, and consequently the smaller arteries of the brain, which are normally thinner than the arteries of the other parts, and which are degenerated, receive the impulse from the heart's jerks, and being thus diseased and fragile—perhaps dilated and aneurismal—give way. From the date of such an occurrence the inebriate is an altered man and never recovers himself.

Finally, I would speak of the great importance of the recognition of the mental condition that in inebriates is the precursor of decided insanity. I have had the opportunity of study-

ing carefully several such cases who had from time to time entered my private hospital for treatment, and many of whom I have been so fortunate as to restore to home and society. The clinical manifestations which I have observed in these cases have been depression, unwonted excitability, disregard of the minor proprieties of life, a change coming over the warmest affections, quick changes and rapid transitions in the current of the feelings, sleeplessness, and a complete change of character and habit; the person meanwhile entertaining no delusions, but occasionally losing his self-control, the general acts and manner at such times being strongly expressive of the inward emotion. There are intervals of perfect calmness and self-control, during which the person clearly discerns his true relations to others and even perhaps recognizes the influence which the incipient disease exercises over his feelings and actions. Finally, in those cases where insanity appears, we see the utter downfall of the intellect manifested by the fury of mania, or the moodiness, suspicion, depression, and impulses toward self-destruction or melancholia. All these are the successive links forged in the chain of the insanity of the inebriate, the study of which is full of interest not alone to the student of mental pathology, but to everyone who desires to lead the wandering mind out of the darkness and mazes of disease back into the light of reason.—*American Practitioner*.

ACTION OF ACONITE AND ACONITINE.

In a large monograph Laborde and Duquesnel have given the results of their observations on aconite.

According to Laborde aconitine acts chiefly upon the medulla oblongata and spinal chord. It abolishes first sensation and afterwards reflex action. It does not affect the excitability of the motor nerves in physiological doses. In somewhat larger doses it increases the amplitude of muscular contraction as seen in the myographic tracing, at the same time that irregularities and intermittencies appear. In a rapidly fatal dose the motor power is quickly abolished, but the muscular continuity disappears almost at the same time as excitability of the motor nerve. Motor inco-ordination is one of the first and essential manifestations of poisoning by aconite. In regard to its action on the heart of the frog, they find a short period of acceleration with diminished amplitude and irregularity, which may pass into a sort of tetanic condition. This is succeeded by greatly increased energy and amplitude of the contractions. This is followed by a third stage of gradual weakening and intermittences, which is, however, not due to paralysis of the cardiac muscle. The chief action of aconite on the heart is exerted through the pneumogastric nerves. The blood-pressure is temporarily increased and then diminished. The

peripheral temperature runs a parallel course with the circulation. The respiration is irregular, the irregularity being chiefly due to spasmodic action of the respiratory muscles, both of the dilators of the thorax and the glottis. Death occurs through the respiration, not through the heart, and artificial respiration is useful both in preventing and curing poisoning by aconitine. It produces vomiting and diarrhoea, apparently due to the irritant action of the poison on the gastro-intestinal mucous membrane. When injected subcutaneously it is probably eliminated by this membrane, and produces the same symptoms as when taken by the mouth. At the commencement of the poisoning there is alternate dilatation and contraction of the pupil, with tendency to myosis, and the same result is produced by the local application of aconitine to the eye. Later on there is progressive and extreme mydriasis. This dilatation is probably a reflex phenomenon due to irritation of the gastro-intestinal mucous membrane and to asphyxia. Aconitine acts on most of the excretory organs in different degrees, the liver being chiefly affected, then the salivary glands, kidneys, and intestines. The first effect is primary, and directly due to the action of the poison on the central nervous system. The second is due to the effect of the poison on the glandular elements by which it is excreted. Aconite, when once absorbed, does not remain long in the blood, and, if the greater part of the blood of a poisoned dog be introduced into the veins of another healthy dog, even a few minutes after poisoning has commenced, no symptoms of poisoning are produced in the second animal.—*Revue de Médecine.*

DIET IN TUBERCULOSIS.

Dr. A. Bidder, of Berlin, concludes three articles on the relation between the alkalies of the food and the ætiology of tuberculosis, by advocating a diet as free from potassium salts as possible, but rich in common salt, as being a sodium salt. He argues that the latter renders the tissues unfavorable to the development of the bacilli of tubercle, and that in young patients with tuberculous processes going on in the bones, joints, glands, lungs, etc., half a gramme to one gramme of common salt should be given three or four times daily with the food, according to age. If dislike to this be shown, benzoate of sodium may be substituted in doses of two-tenths to five-tenths of a gramme (three to seven and seven-tenths grains.) Indeed, the latter salt (known to be useful in the summer diarrhoea of children) is highly relished; it is aromatic in taste and increases the appetite. Bidder thinks, moreover, that the well-known injurious influence of iodide of potassium upon tuberculosis and on scrofulous processes is probably due, not to the iodine but the potassium, which is replaced by sodium in the

stomach. The diet should contain an excess of albumen, of fat, and of salt, in the cases mentioned. The article concludes by a reference to rickets, in which a connection with tuberculosis is attempted to be proved. Rickets is here said to be due to an excess of potassium salts in the food, as one cause at least.—*Berl. Klin. Woch.*

MISCELLANEOUS ITEMS.

QUININE diminishes sweating, after work upon a hot summer day, according to Leibermeister and Kerner.

IN the *Medical Record*, August 16, 1884, Dr. C. C. Stockard reports a fibro-cyst of the uterus weighing one hundred and thirty-five pounds.

THE British Medical Association now numbers nearly twelve thousand members, an increase of one thousand and forty during the past year.

BALSAM of Peru is declared to be a never-failing remedy for pruritus ani. The *British Medical Journal* refers to it as a new triumph in medicine, and says there need be no more itching about the anus.

BEFORE undertaking a postmortem examination Dr. Clevenger recommends holding the hands over strong aqua ammonia when the smarting will reveal all the sensitive or abraded places that need a touch of the caustic before beginning the examination.

A MEDICAL COLLEGE SUED.—Suit has been entered against the Georgia Eclectic Medical College of Atlanta for fifteen thousand dollars. It is alleged that the Faculty violated the state law by graduating students who had not attended two full courses of lectures.

TO ABORT A STYE.—Dr. Fitzpatrick, in the *Lancet*, says he has never seen a single instance in which the stye continued to develop after the following treatment had been used: The lids should be held apart by the thumb and index finger while the tincture of iodine is painted over the inflamed papillæ. The lids should not be allowed to come in contact until the part touched is dry. A few such applications in the twenty-four hours are sufficient.

THE EXPLORING NEEDLE FOLLY.—The tubular needle furnished with all hypodermic syringes is a far better instrument for explorations than the grooved needle called an exploring

needle, and has the additional advantage that it can be used with the syringe attached, which, when so employed, becomes a small aspirating pump. The exploring needle should be discarded from all pocket cases, and substituted by the hypodermic syringe, which is needed also for subcutaneous medication.—*Philadelphia Polyclinic*.

HAMMAMELIS FOR VARICOSE VEINS.—Dr. B. T. Nichols reports four successful cases of treatment of varicose veins by the administration of fluid extract of hammamelis. The patients were three women and one man. One of the women was relieved of suffering from varicose veins during two successive pregnancies. One of them suffered intensely from ulceration of the legs from the knees to the ankles due to a varicose condition of the veins. Under the local and internal use of the drug the ulcers healed and the woman was entirely relieved.—*Philadelphia Medical Times*.

CHOLERA GERMS.—Drs. Maurin and Lange, who have been working at Marseilles since the departure of Koch, claim they have discovered the missing link in the propagation of the cholera-bacillus in the shape of a mucor, which appears on the fourth or fifth day on putrefying cholera-stools, and on these only. It has the form of a mycelium with cup-shaped sporangia, which burst on the slightest agitation, discharging vast quantities of spores which they believe to be the immediate cause of cholera, and which in turn sporifying produces the bacilli of Koch.—*British Medical Journal*.

CHRONIC syphilis is a disease in which sulphate of copper has recently been used with remarkable success. The plan of treatment most successful has been to give this agent in doses of one-tenth to one-twentieth of a grain in solution three times a day, until the characteristic red or copper-colored line appears upon the gums of the patient; then reduce the dose to one-hundredth or one-fiftieth of a grain (restorative doses), and continue its use until every vestige of the disease disappears. Many obstinate cases have thus been reported cured after three months' use of this remedy. My own experience with the remedy in syphilitic cases has been very satisfactory. The cases treated have made speedy recovery, and none of them have ever manifested any ill-effects of the remedy. The abuse of mercury in the treatment of syphilis is often worse than the disease itself, while the iodide of potassa, taken injudiciously, often produces chronic gastritis and indigestion that impairs the general health of the patient for a long time. The old vegetable "alterative" treatment also has its objections. Hence I recommend a fair and judicious trial of cupri sulphas, as above indicated.—Dr. Davis in *Chicago Medical Times*.

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ORIGINAL ARTICLES.

CLINICAL SURGERY IN MICHIGAN.*

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As chairman of the committee on surgery I propose to present to the association a few clinical illustrations calculated to give at least some idea as to how surgery is practiced in Michigan in the present day by one whose business it is to teach and practice it publicly in the State University. For this purpose I have selected the following cases from some of the most interesting departments of general surgery.

I.—CARCINOMA MAMMÆ.

The following case appears to me to be interesting and suggestive as bearing upon the question of the local nature and early treatment of this common disease.

Case I.—Mrs. J. C., age forty-one, came to my public clinic at the University of Michigan, December 14, 1880. General health had been very good up to September 1, 1880. At that time patient for the first time noticed in the left mamma a small, hard lump which was not very painful. It gradually grew larger and more painful, so that she was induced to present herself for advice on the day mentioned, which was three and a half months after the growth was first observed by the patient herself. On December 16 I removed the tumor along

*Read before the Michigan State Medical Society, at Grand Rapids, June 12, 1884.

with the entire gland, and the specimen was sent to the pathological laboratory for investigation. The following is the exact text of Dr. Chas. H. Stowell's report:

PROFESSOR MACLEAN: A small tumor from the breast of Mrs. C. has been examined. It is a most characteristic specimen of "encephaloid cancer." The large alveolar spaces are very distinct; the cells are large and multinuclear and filled with fat granules. It is the most characteristic specimen of encephaloid I have received from your clinic. CHAS. H. STOWELL.

January 7, 1881.

January 10, 1881, Mrs. C. was dismissed cured, at least it is so recorded in the book. March 25, 1881, Mrs. C. returned with a small well-defined and movable lump at sternal end of cicatrix. This was at once removed and patient made a good recovery and was dismissed cured again April 3, 1881.

On April 22, 1881, she returned with tumor the size of a hickory nut at axillary end of cicatrix. This was at once removed along with everything in the axilla which presented the slightest resemblance to gland structure, and in one week she again left the hospital cured for the third time and we all hoped for the last time. June 22, a well-defined but rapidly growing swelling in the axilla brought her once again to the clinic. This was removed and she was dismissed cured for the fourth time, in a few days. On the occasion of this and the previous operations all present were struck with the extremely watery color and appearance of the blood. It hardly tinged the sponges red, and although no large vessels were opened, the oozing was very free and was only stopped by the application of a large and firm graduated compress.

October 15, 1881, Mrs. C. returned with a tumor of small size and well-defined, closely resembling all the other secondary growths which have been referred to. This was at once removed, and she made a rapid and apparently complete recovery and for the fifth time was *dismissed cured*.

December 14, the anniversary of her first appearance at the clinic, a sixth operation was performed with the same satisfactory result as the previous ones, and she was once again *dismissed cured*. Since then Mrs. C. has not appeared at the hospital, but I have frequently seen her, and when heard from a few days ago she was in perfect health and with no signs of further trouble in her breast or elsewhere. During all of the time covered by the operations described this patient suffered extremely from general prostration. For this ferruginous tonics were freely administered, and her strength was at last fully restored. No other internal or constitutional treatment was resorted to.

In my experience, and no doubt in that of many who now hear me, unfortunate women frequently present themselves with carcinoma of the breast advanced to the extent of utter

hopelessness and helplessness, and who, in response to our inquiries, inform us that "my doctor advised me not to be in a hurry about it," or words to that effect. The case of my patient, Mrs. C., is a forcible condemnation of such practice, and if its recital here shall be the means, directly or indirectly, of promulgating the antidote to such baneful and unscientific surgery, I shall consider my time and trouble well expended.

II.—COLLES' FRACTURE.

Some years ago Dr. L. S. Pilcher, a former student of the Ann Arbor medical school, now of Brooklyn, Yew York, published an extremely concise and suggestive monograph on the subject of Colles' fracture.

The principal points made in this monograph are as follows:

(1) That Colles' fracture is always complicated with severe sprain of the wrist joint.

(2) That the fracture in the great majority of cases is easily reduced by forced extention of the hand on the forearm, thereby relaxing the tense posterior aponeurosis, and permitting of the lower fragment being pushed down into its natural relation to the upper fragment.

(3) That when once replaced there is little, if any, tendency to redisplacement of this fracture.

(4) That mechanical restraints, such as splints, are unnecessary; and therefore should not be used.

(5) That the evil results which tend to flow from a bad sprain of a joint, surrounded as the wrist is by very extensive synovial structures, are the chief dangers to be provided for in the after treatment.

(6) That the best means of accomplishing this is by constant passive movement, frictions, etc., of the joint structures.

The principles here quoted have guided my own practice in the treatment of at least a dozen cases, two of which I shall quote here as fair examples of the results obtained in all. One of these two patients is here, and I have much pleasure in presenting him to the association as a living witness of the soundness of the doctrines which I am desirous of having more widely known:

Case I.—A. M. E., law student of Ann Arbor, from Bucyrus, Ohio, on March 30, 1882, was riding a mule at full gallop when the animal suddenly stopped and "bucked," violently throwing Mr. E. over its head. He fell with great force on his extended left hand. Patient was brought immediately to my office, and on examination a most characteristic case of Colles' fracture was found. By first forcibly extending the hand, and second pressing upon the lower fragment, the fracture was easily reduced without the aid of an anæsthetic. No splints were used. The patient having on that day or the following one received his diploma from the law school at Ann Arbor, returned to his home and I saw no more of him till June 25, 1883. He

left Ann Arbor with no appliance on his forearm except a few turns of a common roller, and with instructions to maintain free movements of his fingers and wrist joint.

On June 25 he returned on a visit to Ann Arbor and called at my office, when his wrist was carefully examined by Dr. Frothingham, Dr. Sullivan, Dr. Palmer, and myself, and the following note made in my private case book: "While all the movements of the joint and fingers are perfect, it is still quite possible to trace the line of fracture in the radius by a slight thickening at that point. Patient states that he swings clubs, boxes, and in short does everything as well with that hand as with the other. Patient also states that on his return to his home immediately after his injury he exhibited his hand to numerous medical men with whom he happened to come in contact, and that all with one exception condemned and ridiculed the method of treatment—fortunately, however, without in the slightest degree disturbing his confidence in my views and practice."

Case II.—George Pimmit, age twenty-five, switchman Michigan Central railroad, while coupling cars had his left forearm jammed between two cars, the one car striking upon the end of the elbow and the other on the palm of the extended hand, thereby causing sudden, violent, and extreme extension of the hand. Patient was brought at once to my office and displayed a perfectly ideal case of "Colles' fracture." I at once proceeded to replace the ends of the fractured bone and succeeded in doing so without difficulty or delay. I seized the hand and carried it backwards as far as possible towards the position in which the injury was inflicted, and at the same time applied extension and counter-extension as forcibly and gently as possible, while I also pressed with my thumbs the displaced lower fragment back to its normal relation to the upper fragment, and having done so I locked it there by merely carrying the hand downwards from its position of extreme extension.

The patient watched the different steps of this procedure with the most intelligent interest, and he required no intimation nor assurance from me that the object had been fully attained. He knew it of his own knowledge and at once expressed himself as relieved and satisfied. No further treatment was resorted to beyond the application of a narrow strip of cotton wadding and a few turns of a roller. Patient returned to his work on the Michigan Central railroad in less than one month from the date of his injury, with a perfect hand and forearm, and here he is now a living witness. These are fair samples of a considerable number of cases of Colles' fracture which have within the last few years passed through my hands and been treated as these were.

If I had had an unfavorable result of any kind I should feel in honor bound to report it here, but the simple truth is that I

have not had any such case, although some of those which I have treated have been as bad cases of Colles' fracture as any one can imagine.

III.—SYPHILITIC TREATMENT.

Case I.—Syphilitic Hæmiplegia successfully treated by large doses of potassium iodide.—J. L., age thirty-two, was brought to the University hospital, at Ann Arbor, November 26, 1880, in a most helpless and deplorable condition. He had hæmiplegia of the right side complete, together with paralysis of the sphincters, with complete incontinence of both fæces and urine. His intellect was also very seriously impaired so that it was impossible to obtain from himself anything like a satisfactory history of his case.

It appeared, however, that about two and one-half years before admission to the hospital he had a single hard chancre, for which he took medicine.

No record of the ordinary secondary phenomena could be traced. The hæmiplegia commenced about six weeks prior to his being brought to the hospital.

On close examination an obscure copper-colored rash could be detected on the trunk and upper part of lower extremities. In addition there were two large bed-sores in the region of the sacrum. He was presented to the medical class on the day after his arrival, and his case investigated and prescribed for, namely, ten grains potassium iodide, three times a day. This dose was soon increased to twenty grains, and before long to thirty grains three times a day.

Subsequently he was carried into the amphitheatre at almost every clinic in order that the class might have the privilege of noting the rapid progress of his case towards recovery. It is not necessary to describe in detail here the various steps as they were then noted from day to day; suffice it to say that within six weeks from the date of his first appearance before the class he was able to walk into the class room without any assistance. His hæmiplegia had vanished, his intellect had cleared up completely, his bed-sores were entirely healed, and in short, he was dismissed cured. Some months afterward this patient wrote me to the effect that he had divergent strabismus and some impairment of vision. I replied recommending potassium iodide and electricity, and I heard no more of him until about three weeks ago, when he unexpectedly turned up at the medical clinic for some affection of the digestive organs.

On examination, at this time, no trace of his former serious symptoms could be detected; in fact, he was, to all appearance, in perfect health, and he informed us that he had been constantly at work from the time of his return home.

Case II.—A case of affection of the skull probably of syphilitic origin.—Mrs. J. A. G., age twenty-five, came to the University clinic at Ann Arbor, April 16, 1880. History: Two years ago

(April, 1878) patient began to suffer severely from pain in the left frontal region. The pain was aggravated every afternoon. In a short time the pain became continuous and was accompanied by repeated rigors. Two months after the commencement of the trouble the left frontal bone became thickened and there was exaltation of temperature in the swelling. A year later an abscess formed and bloody pus was evacuated by an incision. The pain was then relieved for a time but soon returned worse than ever.

Patient was married in 1875. She had four abortions and has one living child age three years. Was pregnant five months at time of admission to hospital. The pain had become intolerable, giving her no rest night or day, and she had come to the clinic hoping that an operation might be performed. She was ready and willing to submit to anything, and to incur any degree of danger rather than continue in her present agony.

On examination the left frontal bone was found distinctly enlarged, but there was no local heat and the pain was not aggravated by pressure. Temperature of the body, normal, and pulse, 100. The functions of sight and hearing were somewhat impaired. So far as could be learned from the patient the only treatment she had had was large doses of quinine. No benefit had resulted from this or any other treatment. She was at this time as bad, if not worse, than ever before; and I doubt if any verbal description could do justice to the extreme degree and character of her suffering.

The diagnosis seemed to me to be between malignant tumor of the cranium and syphilis. In favor of the latter diagnosis it will be noted that there were several important points in the history. It should be stated here, however, that the patient was a farmer's wife of unimpeachable character, and her husband was a very healthy, vigorous man. No record of any of the earlier manifestations of syphilis could be elicited by the most thorough examination and cross-examination. Nevertheless, on the principle of giving her the benefit of the doubt, I at once put her upon iodide of potassium, twenty grain doses three times a day, and very soon increased the dose to thirty grains three times a day.

On the fourth day from the time that this treatment was begun patient was again before the class much improved. The pain was greatly relieved, the frontal swelling was decidedly diminished, and she looked well and was in good spirits. In three weeks she left for her home, saying that she was almost entirely well, and certainly feeling much better than she had since the beginning of her ailment.

A letter in my possession from this patient, dated May 30, 1880, reports favorably as to her progress after she had taken the fifth bottle of medicine. Again, on November 21, she writes that her confinement was safely over, and her health on the

whole much improved, but that she found it absolutely essential to resume her medicine as soon after her confinement as possible, since there seemed to be a decided tendency towards a return of her head trouble.

January 2, 1881, she writes me a very full and gratifying report, and closes her letter as follows: "As to the medicine, it does not seem to have any bad effect on my system taking it in such large quantity. On the contrary, it keeps me feeling well, and my health has been better since taking it than it has been before for a number of years."

Finally, on May 15, 1881, that is, about one year after her visit to the hospital, the following is the substance of her report to me: "Now my head hardly ever pains me, and you can hardly see where the protrusion was; it has all gone down and my forehead has resumed its natural shape. It does not seem to me as though I am the same person I was a year ago. I do not believe if I continue taking my medicine that it will ever trouble me again."

This history would, in the opinion of the writer, be incomplete without the following sequel:

November 17, 1882, that is, eighteen months after the date of her last letter, this patient once more appeared at my clinic, but not on her own account for she was then in the enjoyment of perfect health and had stopped all medication months before. She came with her little son, age between four and five years. He was suffering from bow-legs and a painful exostosis of the upper end of one tibia. He was a frail, delicate, little fellow, but, of course, was too young to admit of any evidence being obtained from the formation of his teeth. The infant born under the influence of iodide of potassium was reported as being perfectly healthy.

In these days of scepticism as to the efficacy of drugs, it is cheering to meet with such definite and satisfactory effects as were obtained in these cases.

IV.—LITHOLOPLAXY IN THE FEMALE.

Case I.—Illustrated by a case in a child age seven years.—Lillie B., age seven years, Minden, Michigan, was brought to my clinic, at Ann Arbor, in the latter part of March, 1883. History: Her parents say that she has all her life suffered more or less from urinary weakness, irritability of bladder, incontinence, etc. Four years ago she began to suffer severe pain on micturition for which medicine was administered with but temporary and partial relief. Later, has suffered excruciating pain continuously. Has passed much pus and blood from the bladder. For six or seven months past has taken opiates freely, from which only partial relief was obtained. Has seen many physicians and taken a great deal of medicine, but the bladder has never been explored.

On March 25, 1883, I first examined her. She was in a pri-

vate room in the hospital, as her continual wailing made her intolerable to the other patients. Her general appearance was that of great suffering and prostration. She slept and sat with her thighs widely abducted, and was consumed by a burning thirst. Her sufferings were simply indescribable.

Owing to my unavoidable absence she had been four days in hospital before I saw her, and when I did it was late at night on Sunday, March 25. For several reasons unnecessary to give in detail here, but especially on account of the urgency of her symptoms, I lost no time in having her placed under chloroform, with a view to a diagnosis at least. A stone was detected at once, and I there and then proceeded to remove it.

With an ordinary pair of dressing forceps I rapidly dilated the urethra, and with the same instrument I crushed the somewhat friable calculus, and then, with the ordinary Davison's syringe I washed it out of the bladder to the amount of a small tea-cup full (specimen exhibited). On the 31st, some symptoms continuing, chloroform was again administered and a fragment the size of a hazel nut was found and removed in the same way, after which the patient made a rapid and perfect recovery.

Incontinence of urine disappeared entirely in about a week, and June 26, 1883, the father wrote me a perfectly satisfactory account of her condition; again a few months ago I saw him and heard an equally agreeable report from his lips.

V.—RESECTIONS.—ILLUSTRATED BY FOUR PATIENTS.

The subject of resections of bones and articulations is one which has always had, for very obvious reasons, a great charm for the practical surgeon.

It is my good fortune to be able to show here to-day four patients, each one of whom is a living monument of the beneficent results which it is possible to obtain in this department of operative surgery.

Case I.—Charles Larson, age twenty-two, a resident of Muskegon. This young man is a Swede, and having been only a short time in this country he speaks very little English, although as you see he is a fine, intelligent, stalwart young man. He came to the University hospital on January 15 of this year, a friendless and penniless stranger in a strange land. Ten weeks before that time this patient had his left humerus fractured at the middle of the shaft by a falling tree which struck him with great violence. Notwithstanding the application of careful and skillful treatment at Big Rapids and Muskegon only ligamentous union occurred, and he was sent to me for the treatment of his false joint.

On January 21 I performed resection at the seat of the false joint. After cutting away all the ligamentous tissue and sawing off the ends of bone, I perforated each end by means of the dental engine drill, and with strong silver wire fastened the

ends together. The wound was then stitched up and the arm replaced in a plaster cast which I had had previously applied *with the elbow straight instead of flexed at a right angle*. The cast extended from the shoulder to the hand. Some suppuration occurred and the patient suffered to some extent from septicæmia. On March 5 the cast was removed and straight pasteboard splints resorted to. The elbow joint was stiff, but the fibrous ankylosis was easily broken up under chloroform, and passive movements were ordered to be made daily. At this time the fracture was found united but not very firmly. The forearm was placed in a sling at right angles, and the patient directed to get up and go out as soon as possible.

On May 12 the bone was found solidly united, but a troublesome sinus continued to pour forth pus freely. Under chloroform this sinus was laid freely open, partly with the expectation of finding the silver wire acting as its maintaining cause. No trace of the wire could be found. It was evidently deeply imbedded in the large mass of solid callus which bound the broken ends firmly together. After this free incision the sinus healed rapidly.

The patient's general condition improved proportionately. The muscular power of the arm has steadily increased, the ankylosis of the elbow joint has vanished, and in short, here he is with as good an arm as any man need wish for, and I think that we are justified in pronouncing him as dismissed cured. In conclusion, let me say that this is not the only case in which I have tested with entire satisfaction Dr. Frank Hamilton's suggestion as to treating fractures of the humerus in the straight instead of in the rectangular position.

By the free use of anæsthetics we are now able to obviate ankylosis of the elbow joint which was the great argument in favor of the rectangular position in former times. By using the straight position the form of motion at the seat of fracture is much more favorable to union than that which is present unavoidably when the rectangular position is resorted to.

Case II.—This case is one of resection of the elbow joint, and this is the second time that this same patient, Mr. B., has appeared before this association. In 1876, when the meeting occurred in Ann Arbor, I presented this patient six weeks after operation.

I am very happy to see here to-day a goodly number of the members who were present on that occasion and who, no doubt, will be able to recall this case. At that time the patient who was then aged thirty-five, was just beginning to recover a little voluntary power over his new and growing elbow joint. To-day you see that his power over it is such that, with the exception of a slight defect in pronation, the movements are perfect, and when the history of the case is considered the great beauty of this result may be estimated.

In 1866, that is to say, ten years before I ever saw this patient, he suffered from diffuse phlegmonous erysipelas of this hand and forearm to such an extent that he almost lost his life. As the result of this attack, his elbow joint was destroyed and his arm became practically a useless burden, the forearm being straight. After a lapse of ten years the operation of resection seemed rather a forlorn hope, and I must admit that it was not without hesitation that I ventured to recommend resection instead of amputation as a means of improving the patient's condition. The operation was performed at Pontiac with the assistance of Dr. Le Barron who took charge of after treatment.

Case III.—Resection of the elbow joint.—F. A. Faxon, age thirty-five, Du Plain, Michigan: admitted to University hospital, December, 1878. History: F. jumped from a train in motion, and in falling struck with great force on his right hand, causing serious injury to the elbow joint. As the case was not seen by a surgeon for many hours, the diagnosis became practically impossible on account of the extreme degree of swelling.

Anchylosis took place with the arm almost quite straight, so that it was neither useful nor ornamental to the patient.

December 21: The operation of resection was performed by means of a single straight incision over the back of the arm. No trace of fracture was found, but the radius and ulna were found dislocated backwards and solidly ankylosed to each other and to the humerus. The saw was carried through the center of the bony mass and then about an inch was removed from the upper and the same amount from the lower fragment, after which the wound was closed by interrupted sutures. Patient made a rapid recovery.

The following notes of his progress are copied from the clinical records of the hospital as taken at the time by Mr. now Dr. E. W. Lee:

January 8, 1879: Patient appeared in clinic able to squeeze pretty well and to move his forearm considerably.

January 25: Owing to rather too free exercise of the hand and arm yesterday there is slight swelling to-day, but the patient has very considerable amount of power of flexion of the forearm, indicating that a new and first-class joint has formed in five weeks.

April 9: Patient came from home to report here to-day. His arm is complete in almost every respect; he can pronate and supinate his forearm as well as flex and extend it, place it on the back of his head, squeeze with it strongly, and in short has as fine an arm as could well be wished for, the only trouble is a little lateral movement which will probably disappear in time." Fortunately I am able, by the kindness of this patient, to exhibit to the society the ultimate result obtained in this case, which, in my opinion as well as in that of the patient himself, leaves really nothing to be desired. I ought to state here

that this is a fair sample of the results obtained in at least twenty cases of resection of the elbow joint which I have performed, the large majority of them having been at the University clinic.

Case IV.—The next case I have to present is one of resection of the shoulder joint, which for the most part will speak for itself. This young man, T. M., who is now twenty-three years old, had the operation of resection of the shoulder joint performed by me more than five years ago under the following circumstances:

By the accidental discharge of a fowling piece in his own hand a large charge of duck shot, gun wads, etc., was lodged in his right shoulder joint, causing a gun-shot fracture of the head of the humerus. About twenty hours after the accident I saw him and the question of amputation or resection was taken into consideration. I decided in favor of the latter, and I show you this six-ounce jar full of fragments of bone, shot, wads, and debris which I removed from his wound. The operation was performed under chloroform, and with the assistance of Dr. Howe, of South Lyon, Michigan, who conducted the after treatment.

The patient made a good recovery, and is now employed as baggageman on the Toledo and Ann Arbor railroad. A few days ago I stood on the platform at the Ann Arbor depot and saw him handling trunks and doing everything that a baggageman is required to do, and I need hardly say that the sight was a very gratifying one to me. You observe as he stands with the upper part of the body exposed to view that his right arm is somewhat shorter than the left; the acromion process stands out very prominently, and there is a scar about six inches long which marks the site of the original injury and the operation. *You will also observe the wonderful freedom and power with which the patient wields his arm. I do not think that there is anything within the scope of the natural shoulder joint that he is unable to do.* It would, in my opinion, be difficult to imagine a finer illustration of the wonderful reparative powers of nature when afforded a fair chance by the aid of judicious surgery.

Case V.—*Resection of shoulder joint for dislocation and fracture of the surgical neck.*—In this connection I wish to report here the following case although I am unable to present the patient in person:

Mrs. H., age fifty-five, of Fenton, Michigan, on April 1, 1881, fell and sustained a dislocation downwards of the head of the right humerus. She was seen by a medical man who made an effort at reduction.

On July 2 the same medical man, accompanied by a brother practitioner, made a second effort under anæsthetics. July 12, that is, three months and eleven days after the original injury, Mrs. H. called upon me at Ann Arbor.

I found dislocation downwards of the head of the humerus, with fracture of the surgical neck. The hand and forearm were much swollen. The arm was entirely useless and the pain was incessant and excruciating.

Resection of the head of the humerus seemed to me to be the only resource, and this I immediately proceeded to perform. The head of the bone was imbedded in and agglutinated to the axillary plexus of vessels and nerves by a large and dense mass of inflammatory new-formation, out of which it had to be dissected without the mechanical aid of the leverage of the humerus.

The operation was a very difficult and tedious one, but was finally accomplished without injury to any of the important structures which lay in such close proximity to the displaced fragment of bone.

The patient made a good recovery.

Dr. Riker, of Fenton (who was not concerned in the treatment of the case), in response to my request, very recently visited this patient, and reports as follows:

"FENTON, June 1, 1884.

"She has now the perfect use of her arm, and can raise it to her head, and can move it freely in any direction that she wishes, and there is not any pain whatever in her arm or hand. Her business is that of the most laborious—washing and ironing for a living—and the operation is a perfect success in every particular."

The age of the patient, the nature of the injury, the great danger and difficulty of the resection, the excellence of the final result, all combine to make this a case of more than common interest.

VI.—LIGATURE OF THE POPLITEAL ARTERY.

Case I.—Accidentally wounded in an operation for necrosis of the lower end of the femur.—The popliteal is one of those arteries which the surgeon, for obvious reasons, shrinks from interfering with, and which, as a matter of fact, is rarely the subject of ligature in its continuity. The following case is, in the opinion of the writer, interesting as an example of the successful performance of this operation under circumstances which, while rendering its execution extremely difficult, admitted of no safe alternative unless amputation of the thigh may be so regarded.

I. G., age twenty-eight, Holland, Michigan, came to the University hospital at Ann Arbor, November 15, 1880, suffering from necrosis of the femur of fourteen years' standing. The lower end of the femur was considerably enlarged. Several old standing sinuses existed on the inner side, through which the probe came in contact with the large, flat, loose exfoliations; the knee joint was partially ankylosed and the tissues of the popliteal region were thoroughly infiltrated by dense deposits of inflammatory new-formation. The patient's general health

was good and he was a large, vigorous young man. Chloroform was at once administered and the removal of the exfoliations proceeded with. One of the ancient sinuses was freely enlarged and the bone forceps guided by the finger down to the loose bone. This was seized by the forceps, and its removal by steady traction begun. It was a large, flat piece of bone with ragged edges, such as we very often meet with in this situation.

Before this procedure had been carried very far, a gush of blood took place of such a description as to leave no room to doubt that it was the main trunk of the popliteal artery. I at once withdrew my forceps (leaving the exfoliation behind) and introduced the forefinger of my left hand into the wound. Guided by the torrent of hot blood my finger soon covered the opening in the vessel and the bleeding was completely arrested. These manoeuvres, as you may easily suppose, took less time to execute than they do to describe. Having the hæmorrhage thus completely under my control, I proceeded with my bone forceps to seize and remove all the exfoliated bone which I could find, and the future history of the case demonstrates that no fragments were overlooked.

Having satisfied myself on this point I directed my assistants to apply Esmarch's bandage to the limb, and I withdrew my finger from the wound only when the bandage had been applied to all the parts below and was ready to compress the vessels at and above the seat of wound. The next step was to make one long straight incision over the center of the popliteal region, extending from the upper to the lower end of the space. I then dissected with great care down to the popliteal artery, which I demonstrated to the class. The opening in it consisted of a ragged tear extending through about one-half of the circumference of the artery at the middle or deepest part of the popliteal space. The dissection was a long and tedious one owing to the greatly thickened and altered condition of the tissues. A carbolized silk ligature was applied above and another below the wound in the artery, and the wound was filled temporarily with carbolized oakum and the limb lightly covered with cotton wadding and a bandage.

The further history of the case is simply one of uninterrupted recovery. The ligatures separated on the twelfth and fifteenth days respectively; the wound healed rapidly by granulation, and one month from the day of operation the patient was dismissed cured, not only of his rare and dangerous arterial wound, but also of his long-standing and loathsome necrosis.

Mr. President, the man who lives by the practice of surgery has a hard life of it. His lot is cast amid scenes of pain and anguish. His hours of rest and relaxation are few and brief; his cares, anxieties and disappointments are numerous and harrowing. The honors and emoluments which fall to his lot are contemptibly disproportionate to the intensity and persist-

ence of his efforts, and to the character of brain work incessantly required of him. In the conscientious discharge of his multifarious labors he must hope to find his highest and best reward. In such a retrospect as I have now been privileged to present to you, my professional brethren, I am able to find, I rejoice to say, gratifying compensation for the trials and tribulations, the labors and disappointments of my professional life. After nearly twenty-five years' active service in its ranks, I can truly say that there is no other profession or avocation in life that I should be willing to transfer my allegiance to.

SECOND OPERATION FOR EPITHELIOMA, WITH CURE.

BY D. M. GREENE, M. D., PINCKNEY, MICHIGAN.

John Ruttman, German, age about fifty years, residing in Iosco, Livingston county, whose family I have treated the past four years, had what he called a "cold sore" on his lower lip. I had noticed it for a year and a half and often spoke of it, but Mr. R. always said it did not trouble him.

October 18, 1883, I was called to attend his wife in confinement when Mr. R. consulted me concerning his lip. He said it had been giving him considerable trouble for some time, and had become quite painful. On examination I diagnosed epithelioma, and advised him to go to the University Hospital and consult Professor Donald Maclean, and gave him specific directions—hoping he might not go astray. I did not see him again until December 13, nearly two months after, when he came to my office very pale and weak and told the following story: Said he went to Ann Arbor to see Dr. Maclean, but while going from the depot to the Hospital he was accosted by a young man who asked him if he was going to the hospital? He answered that he was directed to Dr. Maclean, and had come there for that purpose. The gentleman then told him that Maclean was not there any more; that he had moved to Detroit, and when people came here for operations they went to the other hospital, directing him to the "Homœopathic" He went there and the surgeon diagnosed epithelioma and advised an operation, which he proceeded to perform. The patient remained in the hospital. On the fifth day the Doctor removed harelip pin, but union had not taken place, and it was discharging considerable offensive pus. After remaining there for some time they sent him home without any improvement, directing him to return in two weeks.

On examination I found a large ulcer, with hard, tender, painful base, involving the lower lip almost completely, but lymphatics not involved. I advised him to return to Ann Arbor and consult Dr. Maclean—and offered to go with him, but he declined saying he had got enough of Ann Arbor, but

would put the case in my hands and abide by the result. I gave him the following prescriptions and agreed to see him at his home in six days and perform an operation if advisable.

R. Acid. nitro-mur. dil.....	℥i.
Cinchona sulphatis.....	℥iss.
Tr. gent.....	℥ij.
Glycerin.....	℥iss.
Aquæ cinnamoni.....q. s. ft.	℥iv.

M. Sig. Teaspoonful in an ounce of water before meals.

NUMBER TWO.

R. Elix. phosphate ferri. quin. et.	
strych.....	℥ij.
Glycerine.....	℥i.
Aquæ.....q. s. ft.	℥iv.

M. Sig. Teaspoonful one-half hour after meals.

Six days later I went to Mr. R.'s home. Found him feeling much improved—appetite good, bowels regular (which for some weeks had been constipated), but the sore on his lip was worse,—swollen, hard and painful; lymphatics not involved. I performed an operation—cut well outside of the diseased tissue making a v-shaped incision from near each angle of mouth down nearly to chin, cutting away nearly the entire lip. I then brought forward the cut edges and secured them with harelip pin—horse-hair and silk sutures. On the fifth day I removed the pin, sutures on the sixth. Union by first intention. General health improved and he made a good recovery. It is now about nine months since the operation and no return of the disease and he has a good shaped lip.

WHAT IS THE INITIAL HYPODERMIC DOSE OF SULPHATE OF MORPHIA?

BY GEO. H. CLEVELAND, M. D., LANSING, MICHIGAN.

This may seem to be a rather queer question to ask, but I will venture to say that many practitioners have been led to consider this same query. Why so? Because of the uncertain effects produced upon the different individual constitutions, making it impossible to administer this drug in a routine manner. We all know the authorities say the initial dose is from one-twelfth to one-sixth of a grain, varying slightly within these limits, according to the age, sex, and robustness of the patient, and the particular affection for which it is to be given. But may I ask if we are warranted in going beyond this maximum figure? Bartholow, one of our best authorities upon hypodermic medication, often recommends one-fourth of a grain, and I have recently had experience in which I think I was warranted in giving a large initial dose:

Case I.—Was a severe attack of enteralgia occurring in a small but rather strong man. I was quite well acquainted with this man's constitution and I consequently did not hesitate in injecting one third of a grain. I watched the effects very closely but could get no response from the drug. In about forty minutes I repeated the dose, and still again repeated the quantity one hour and a half after the first dose, making one grain of sulphate of morphia hypodermically before rest was obtained. It was the last of the enteralgia, however, and no untoward symptoms of any kind followed. Was I warranted in risking such a quantity?

Case II.—Was that of a middle aged lady possessing hysterical tendencies. This lady was threatened with an abortion at the second month, being taken quite suddenly with severe uterine pains, which soon developed into clonic spasms of an intense character. I immediately gave her one quarter of a grain beneath the integument of the arm, which subdued the spasms somewhat for ten or fifteen minutes. In about half an hour it was found necessary to repeat the dose, which also gave temporary relief. Fearful of giving any more morphia, chloroform was resorted to and continually administered for an hour or two when it was taken away, and the patient passed into a narcotic condition. Respiration, 12; pulse, 70; and the pupils finely contracted. Watched the case very carefully for several hours, but nothing more transpired, and the patient made a rapid recovery.

Now did the severity of these cases demand a large initial dose, or should I have kept within bounds?

ORIGINAL TRANSLATIONS.

FRENCH LITERATURE.

TRANSLATED BY F. B. FLORENTINE, M. D., SAGINAW CITY, MICHIGAN.

TERTIAN INTERMITTENT FEVER: TREATMENT BY SUBCUTANEOUS INJECTIONS OF CARBOLIC ACID.

Observation.—A coachman, aged thirty-six, came under my care, in the hospital Saint Antoine, June 26, 1884. This patient who now suffers from tertian fever, has had, already several attacks of malarial fever.

First attack.—Seven years ago, that is, in 1877, he was attacked for the first time at Richemond with intermittent fever that presented a well marked tertiary type. The attack would recur regularly every other day at 4 A. M., and last about two and one-half hours. The cold, shivering stage was quite violent, the patient's teeth would clatter, and he seemed to shake from head to feet. The warm stage was short, sweating suc-

ceeding quickly the cold stage. The chill lasted about an hour and a quarter, and the hot and sweating stages, combined, about as long. The fever was subdued by means of quinine, but the patient does not know anything regarding the size of the dose that they gave him; he simply recollects that he took it during the three months that he was sick.

Second attack.—Five years later, in 1882, the access of fever re-appeared, assuming again the tertiary type, and moreover reproducing itself, as the first time, at 4 o'clock in the morning. The patient entered the Charité hospital, and quinine was given him in the following manner; the day preceding the exacerbation, one gram; the day of the access, fifty centigrams. The exacerbation was subdued at the end of three weeks, but quinine was administered for eight days yet after the fall of the fever. The patient took consequently fifteen grams during the time of the accesses, and twenty-two and fifty one-hundredths grams during all the time of the treatment.

Third attack.—He entered again in the hospital in May, 1883, under the care of Dr. Montard Martin, in the Hotel Dieu, and we again administered quinine in the same condition and doses. The accesses of fever are tertian, and take place as usual at 4 A. M., but have not the same regularity. Two or three times it aborted the *malaise* and headache announcing the eminence of the exacerbation, but during these days the fever failed to appear. The *accès* (access) of the fever was overcome at the end of four weeks, but the patient remained fifteen days longer in the hospital under the same treatment. He consequently took twenty-two and fifty one-hundredths grams during the time of the exacerbations, and in all thirty-three grams of quinine.

Fourth attack.—For the fourth time this patient is taken with access of fever June 18, 1884, at 4 o'clock in the morning. The previous day he felt quite badly. From the 18th to the 26th of June, the day he entered the hospital, the exacerbations have been typically tertiary. The patient is fatigued without appetite, cephalalgia almost continuous, very intense at the moment of access. The spleen and liver are of normal size.

The 27th of June, the access took place, as usual, at 4 A. M., and lasted till 5:45 A. M. In the morning I gave him two subcutaneous injections of a solution of carbolic acid of one one-hundredth. The syringe used contained one and twenty-five hundredths grams; therefore two centigrams and a half of carbolic acid were injected.

June 28: Day of apyrexia, no access of fever, etc. Four injections, two in the morning and two at night. Consequently five centigrams of carbolic acid were injected.

June 29: Access at 4 A. M.; at 5:30 A. M., it was over. During the day the patient felt better than usual, notwithstanding it being the day of the access ("his bad day"). Two injections morning and evening.

June 30: Apyrexia. Two injections morning and evening.

July 1: Access at 4 A. M. The temperature at 39.4° centigrade. Access from 4 A. M. till 5:15 A. M. Three injections in the morning and two at night.

July 2: Apyrexia. Three injections.

July 3: Access at 4 A. M. Temperature fell to 38.8°. The chill lasted from 4 A. M. till 4:45 A. M., the sweating stage from 4:45 A. M. to 5:15 A. M. Two injections in the morning. The day is good.

July 4: Apyrexia. Three injections morning and evening.

July 5: Exacerbation at 4 A. M. Temperature fell to 38.4°. Chill lasted from 4 to 4:30 A. M. Sweating stage from 4:30 to 5 A. M. The patient feels better. Two injections morning and evening.

July 6: Apyrexia. Three injections morning and evening.

July 7: Access light at 4 A. M. Temperature, 38°, and the whole duration lasted but forty minutes. Two injections morning and evening.

July 8: Apyrexia. Two injections morning and evening.

July 9: A very slight attack at 4 A. M. Temperature, 37.8°, and the access lasted but half an hour. Two injections.

July 10: Apyrexia. Three injections morning and evening.

July 11: The exacerbation did not take place. The patient, however, had headache at the time that the access generally disappeared. Temperature, 37°. Two injections morning and evening.

July 12: Three injections in the morning.

July 13: No access. The two last injections are given. Dating from this moment, the general state of the patient was excellent, and the exacerbations did not re-appear again. The patient left the hospital the 19th of July. I again saw him within the last few days, that is three months after treatment, and ascertained that he has been real well ever since.

The treatment by subcutaneous injections of carbolic acid, of one one-hundredth, lasted seventeen days, and the exacerbations were cut short in thirteen days. During that period, eighty-four centigrams of carbolic acid were injected. The injections were attended neither by general nor local trouble. The seventy-seven punctures have been absolutely innocent; we observed neither suppuration nor induration of the cellular tissue, nor the least trace of inflammation. The pain felt at the moment of the injection was insignificant. The fever was not abruptly cut short, and the intermittence preserved its clearness till the last moment. The exacerbations re-appeared at a fixed day and hour, but were lessened in duration and intensity. It is also interesting to notice that the temperature gradually lowered at the rate of three to four tenths degrees per day from the beginning.—*Gazette Hebdomadaire de Médecine et de Chirurgie.*

HOSPITAL REPORTS.

RANDALL'S ISLAND HOSPITAL, NEW YORK.

MEDICAL WARDS.

REPORTED BY W. E. HALLOWELL, M. D., HOUSE PHYSICIAN.

CASE OF DIPHThERITIC CONJUNCTIVITIS FOLLOWED BY PARALYSIS.

Kate Quinn, age, eighteen months. For several days previous to the first observation this child suffered from what was apparently simple catarrhal conjunctivitis. On the evening of September 30, the entire right conjunctival sac was found to be covered by a well marked grayish, firm membrane, which could not be removed by rubbing, though force sufficient to produce bleeding was employed. The membrane extended from the palpebral margin over the whole conjunctiva to the corneal border; it was abruptly defined at its edges and no redness or puffiness of the lids, chemosis or cloudiness of the cornea was apparent, though the lids were quite stiff. The iris was unaffected and the secretion from the conjunctiva was rather less than normal, the eye, indeed, looking quite dry. The left eye presented the ordinary appearance of catarrhal conjunctivitis. She was feverish and restless, and her pulse was very rapid. She was at once isolated and one grain of quinine and five minims of tincture of chloride of iron were given every two hours. This treatment was continued through the entire course of the disease. Both eyes were kept flooded with a saturated solution of boric acid, but no attempt was made to seal up the unaffected eye, which, however, did not become involved.

On the next morning a more thorough examination was made. The eyes were found in the same condition, and the entire mucous tract, from the nose to finer bronchi, was in a state of catarrhal inflammation, but no obstruction occurred in the nose, and though for a short time respiration seemed much impeded, no membrane was to be seen on the pharynx nor did the obstruction to breathing ever become serious; indeed at no time was there any evidence of the extension of diphtheritic inflammation beyond its original site in the right conjunctival sac. After a day or two the secretion in the affected eye became more abundant and of a muco-purulent character.

Following is the record of temperature and pulse:

October 1: A. M., temperature 101.5°; P. M., temperature 101°, pulse 164.

October 2: A. M., temperature 99.7°, pulse 150; P. M., temperature 99°, pulse 150.

October 3: A. M., temperature 99°, pulse 150; P. M., temperature 99.6°, pulse 150.

October 4: A. M., temperature 99.5°, pulse 130; P. M., temperature 99.7°, pulse 125.

The temperature now sank to about normal, and continued so until October 12. On October 6 the membrane had disappeared, and only a slight muco-purulent discharge to indicate the past inflammation. It was thought that all danger was past, but on the next day, from no assignable cause, the cornea became white, a large central abscess formed, perforation ensued within twenty-four hours and prolapse of the iris followed. Upon the first appearance of corneal cloudiness eserine was freely employed and as there was no pressure from heavy lids, narrow fissure or chemosis, nothing else was done. The eserine seemed to have no effect in arresting the suppuration.

During the next week the case progressed favorably in all respects, the conjunctivitis and other mucous inflammations gradually subsiding.

On October 12, paralysis of the right arm came on, sensation and motor power being both completely lost, the limb hanging cold and lifeless at the side. Coincident with this was a decided rise of temperature, and below the temperature record for the next few days is given:

October 12: A. M., temperature 101.5°, pulse 166; P. M., temperature 102°, pulse 160.

October 13: A. M., temperature 100.3°, pulse 180; P. M., temperature 100.3°, pulse 172.

October 14: A. M., temperature 100.5°, pulse 172.

The temperature now sank but still remained a little above the line of health. During these three days the right facial nerve, the left arm, and both legs were successively paralyzed but the loss of function, though complete, was so transient that each part had nearly recovered before the part next affected became involved.

At the time that the right arm became affected, a swelling appeared at the wrist, at first colorless, but soon of a bluish red hue, and at all times extremely painful. It seemed to me to be a swelling of the ends of the radius and ulna or a thickening of their periosteum. The joint itself was not affected.

On the occurrence of paralysis of the right leg a similar swelling occurred on the outer side of the right tarsus. These swellings remained and continued to be tender after the paralyzes had all disappeared, and in fact as long as the patient remained under observation, though they gradually grew better.

She now gradually improved, though on several occasions the swollen joints suddenly enlarged, and, coincidentally, fever and an increased secretion from the mucous tracts formerly inflamed occurred.

She was discharged, the mucous inflammations remaining,

but of a very mild character, and with a fair pupil in the right eye, though how much sight remained could not be ascertained.

Throughout the course of the disease she received, in addition to the treatment detailed above, two ounces of brandy *per diem*, and the bronchitis was treated in the ordinary manner.

GANGRENE OF THE VULVA DUE TO BRIGHT'S DISEASE.

Kate Flannigan, age, fifty years. This patient was admitted August 7, 1884, suffering from extensive gangrene of the vulva and in a nearly comatose state. She was blanched from loss of blood, which, however, was not at that time escaping, except to a very small extent, and her pulse was rapid and very weak. The indescribable odor prevented a very minute examination at this time and she was too depressed to be able to give intelligent answers. Her vagina and rectum hung loose from the pelvic outlet, all the connective tissue of this region being destroyed. Nephritis was immediately suspected to be the cause of this condition, but no urine free from blood could easily be obtained.

Few hopes of recovery were entertained as her pulse could hardly be felt, nor could she be aroused without great difficulty, and then but imperfectly, else more determined efforts would have been made to establish the diagnosis.

She was placed in a tent and a poultice of iodoform, thymol and charcoal applied to the gangrenous parts. Five minims of oil of turpentine were given every two hours. Food was given as freely as possible; alcohol could not be borne. In a few days her condition was much improved and the following history was obtained:

At the age of thirty-five she had scarlet fever, but she gave no evidence of having had nephritis at that time nor soon thereafter. She had had seven children during her menstrual life, but in none of her gestations did she have any dropsy or other signs of renal disease. She had always been a moderate drinker, though of course this statement must be taken with allowance. At her menopause she noticed dropsy in her feet at each menstruation, and even after all "show" had ceased, the œdema occurred at the time that menstruation should have taken place, and she has been so affected at intervals of about a month since. At this time she confesses to quite hard drinking, and especially for the past seven months, and for three weeks prior to her admission here she was on a continual "spree." Two days before her admission her legs suddenly swelled enormously, the œdema extended to the genitals and extensive gangrene of these parts occurred, the swelling subsiding before admission. She became unconscious at this time.

The urine at this time was abundant and of low specific gravity (at one time since, it amounted to five pints during the day and its specific gravity was one thousand and eight), con-

tained a small amount of albumen and a very few waxy casts with a small number of blood corpuscles. Her heart was hypertrophied and her pulse soon became tense and rapid. There was very little disturbance of vision, and no history of convulsions, colic, vomiting or diarrhoea was obtained, but a persistent headache troubled her during last June. The condition of every organ was examined, but nothing further of an abnormal character was found.

The attack seemed to me to be an exacerbation of a pre-existing chronic nephritis of the interstitial variety, the outbreak having been determined by her last debauch and the putrescent disease probably caused by her intemperance.

The sloughs began to separate in about two weeks and at about that time the turpentine was discontinued, it having been given for the latter half of the time in two minim doses. The sore was dressed with an ointment of equal parts of iodoform and balsam of Peru, and reduced iron in five grain doses was given after each meal. The parts rapidly cicatrized but, soon after the patient began to walk, it was found that the uterine supports had been destroyed and that the uterus had prolapsed from its position. She gave no history of uterine troubles before this attack. The condition of the parts allowed of no plastic operation for the relief of this condition, the whole pelvic floor being composed now of dense cicatricial tissue, and a stem pessary was suggested as the only means of relief. At this time she is, with the exception of the ordinary discomforts of a woman with a displaced womb, in perfectly good condition.

EDITORIAL PERISCOPE.

A NEW SPECIFIC FOR RHEUMATISM.

The observations made from the treatment of one hundred and eighteen cases of various types of rheumatism with the oil of ganetheria in Bellevue hospital are reported by Dr. Seeley in the *New York Medical Journal*, November 8. The medicine was administered in various ways. It was most agreeably given in capsules, alone, or mixed with salicylate of sodium, or in soda-water as a flavoring. The form of administration most used was an emulsion of ten minims of the oil to half a drachm each of glycerine and water. In some cases two drachms of this mixture were given every two hours during the day, and every three hours during the night. Within twelve hours the patient would express great relief. All pain and swelling would generally have disappeared by the end of twenty-four hours. The patient would now have ringing in the ears and deafness, similar to that produced by large doses of quinine, the dose being now

reduced in frequency according to the relative amount of cerebral and joint symptoms. Nausea and vomiting and increased cerebral affects, with a tremulous action of the muscles of hands, limbs and face, were indications that too much of the medicine was still given.

The oil was found most efficient in the acute articular variety of the disease; the remedial powers of the drug, in such cases, was very marked.

ALCOHOLISM: A DESERVED TRIBUTE TO AN AMERICAN AUTHOR.

A high and just tribute to Dr. A. B. Palmer's late work on "Practice" was paid by Dr. Benjamin Ward Richardson in his presidential address delivered at the National Temperance Congress, Liverpool, England. Dr. Richardson's address was upon the "Scientific Bases of the Temperance Reformation." In his observation;—"as a fact very generally admitted among advanced medical scholars, that the courses of acute and chronic diseases, due primarily to other causes than alcohol, are much intensified, in respect to danger, among those who even slightly indulge in spirituous beverages;"—he claims to be citing a great clinical truth not new in medicine, but one declared with impressive emphasis by one of the shrewdest practicing surgeons that ever lived, Sir Astley Paston Cooper.

In following the teachings of this distinguished observer, he remarks: "I have said nothing that could be more firmly said than by two who have followed me, Professor Flint, of New York, and Professor Alonzo Palmer, of the University of Michigan."

From the writings of the latter, Mr. Richardson makes liberal quotations, and speaks of Dr. Palmer's recent work on the "Practice of Medicine," as "the most truly practical volumes that have appeared on the subject since Watson's famous lectures."

Upon the subjects of acute and chronic alcoholism, Dr. Palmer writes with such force and clearness that the meaning is unmistakable. Under the head of "*Pathology, and Anatomical Changes in Chronic Alcoholism*," we take the following extract:

"On the stomach it produces, especially when concentrated, irritation, congestion, changed secretion of the gastric glands, degeneration of the submucous tissue, destruction of the secreting structures, ulceration sometimes, and hypertrophy of the fibrous tissue. Absorbed, it has a special attraction for the nervous tissue, for the brain, and also, though to less extent, for the liver. It produces more or less paralysis of the vaso-motor nerves, it changes the relation of the blood and tissues, it diminishes oxidation, and causes congestion of the liver, the kidneys, the lungs, and the brain. It generally increases the

sugar in the liver, and the water secreted in the kidneys. It increases the tendency to abnormal fat in the tissues generally, and tends to produce fatty degeneration. Above all, it acts chemically upon the soft nervous tissue.

"It causes, in its continued use, the proper nerve elements to waste, a serous fluid to be effused, and it induces in the nervous matter the production of granular fat, and causes development of the connective fibrous tissue. All parts of the body under its poisonous influence have a lower vitality.

"Slow morbid changes occur in the lungs, the liver, the kidneys, the heart, the large vessels, and in every organ of the system. The cranial bones are often thickened, and become more dense. The nutrient nerves at length become paralyzed, producing results similar to what occur in their division. From the nutritive changes in the kidneys and the lungs, there is diminished elimination of urea and other salts of the urine, and of carbonic acid from the blood. Whatever may be thought of the moderate use of alcohol (and no one has been able to define the limits of moderation), that these effects follow its immoderate use is not questioned."

PREVENTION OF EPIDEMIC CHOLERA IN AMERICA.

While the American Public Health Association was holding its twelfth annual meeting in Saint Louis, there was held in the same city a conference of members of the several state boards of health. This conference met to consider ways and means to meet the invasion of cholera which threatens this country. The committee appointed to determine the nature and character of the practical work required for the prevention of the epidemic of Asiatic cholera in this country, reported the following, which was adopted by the conference and by the association:

Origin and Dissemination.—There are three essential factors to the prevalence of cholera in this country as an epidemic,—(1) the importation of the disease by means of ships more or less directly from its only place of origin in India; (2) local unsanitary conditions favorable to the reception and development of the disease; (3) persons sick with the disease in some of its stages, or things infected by such sick persons, to carry it from place to place. These three factors naturally suggest the methods of combating the disease, for which there is needed practical work,—international, national, and interstate, state, and local. So far as relates to state and local boards of health, their organization and activities are greater than ever before; but it must be admitted that after cholera has been introduced into a country, inland quarantines are not easily and successfully maintained, although efforts in this direction are then advisable.

In view of the threatened introduction of cholera into this

country during the coming year, and the consequent immense waste of life and property values through derangements of commerce, trade, and productive industries, it is the sense of this conference that the general government should maintain such a national health service as shall, by rigid inspection at the port of embarkation, question the freedom from disease and infection of all persons and things from infected districts, and shall secure the surveillance of such persons and things while on shipboard, and, when necessary, detention at quarantine stations on this side for treatment and disinfection.

Official Inspection.—In view of the present threatening aspect of Asiatic cholera, and the constant danger from other communicable diseases occurring at foreign ports having commercial relations with the United States, we urge upon congress to provide for the appointment and maintenance at all such foreign ports where cholera, yellow fever, plague, small-pox, or scarlet fever exists, or are liable to exist, of medical officers of health, the same being either accredited consuls, or attached to the consulates. The duties of these officers shall be to give notice, by telegraph when practicable, of the existence or appearance of any of the above named diseases to some constituted authority in this country; to give notice of the departure of any vessel known or suspected to be infected for any port in the United States; and, whenever requested by the master of any vessel about to load or leave for this country, to inspect thoroughly such vessel in all her parts, and also her cargo, her crew and passengers, to use such cleansing and disinfection as he may deem necessary, and to satisfy himself that all persons about to sail are free from dangerous communicable diseases, are not recently from infected places, and are properly protected from small-pox, giving to her commander a certificate of the inspection, and of all precautionary measures taken. And it shall be the duty of the central authority in this country promptly to transmit intelligence of the existence of the above mentioned diseases at foreign ports and places, and of the departure of dangerous vessels for the United States and Canada, to all state and local health authorities in the country which may be interested in the same.

We further recommend, in case of those foreign ports which have no consular agents of this country or no telegraphic communication with this country, and which are liable to transmit pestilence through commercial intercourse, that one or more medical officers be chosen to visit such ports as often as may be deemed necessary by the central health authority in this country, so as to give trustworthy information of the health and sanitary condition of those places.

Canadian Health Alliance.—Inasmuch as the Dominion of Canada is equally interested with the United States in protecting itself and the United States from the importation of danger-

ous diseases, we suggest that congress take such measures as will bring about concerted action with the Dominion and the British government, by which the consuls of this country or of England at foreign ports shall examine and take such action as they may deem effective, and notify the authorities of such government as has authority over any port to which any ship may sail in the United States or Canada, in order that such government may be in a position to take effective measures against the importation of these diseases.

We are gratified that the authorities of the Dominion of Canada and of the Province of Ontario have taken active steps toward protecting the people of Canada, and indirectly those of the United States, by the adoption of extensive quarantine regulations. We feel, however, that with respect to those regulations regarding the landing of passengers from the mail steamers along the Saint Lawrence, etc., further special regulations for the thorough disinfection of the baggage and effects of all passengers, cabin or steerage, as come from infected ports or places, should be carried out in a manner similar to that recommended by the National Board of Health. Believing that the importation of cholera into this country has usually attended the presence of immigrants from infected countries, we therefore recommend that all such immigrants be prevented from landing at our ports until such time as the danger of the introduction of cholera by them shall have passed.

The inspection and quarantine service inaugurated by the National Board of Health, and set forth in the paper by Dr. Smart before this conference, but which system is now inoperative for want of an appropriation by congress, meets with our cordial approval. To enable these protective measures to be carried out, we recommend that congress be urged in the strongest terms to legislate on this subject at an early date in its coming session, and to appropriate such funds as may be needful. The expenses incident to the work which has to be performed at foreign ports, and the establishment of refuge stations at points on our own coast for the detention and treatment of infected vessels arriving from foreign ports, should undoubtedly be borne by the national government, and not by individual states or municipalities; for the benefits accruing therefrom are general, and not restricted to localities, although some ports and cities on the coast may have a more immediate interest in the matter than others in the interior. It is probable, however, that this national protective work may not be sufficient.

Local Safeguards.—It will undoubtedly delay and lessen the chances of invasion, but it may not prevent invasion. The poison of the disease is subtle, and may effect an entrance into the country at some unguarded point. The funds necessary to the stamping out of the disease in a particular locality, and to the prevention of its spread to other localities, might in some

instances be borne by the municipality or state affected; but should the disease occur in a locality which has failed or is unable to make provision for the occurrence, its spread to other cities and states would be imminent. The want of means at the infected point would be disastrous to many others. Congress has recognized the necessity for aid to state and local boards of health under similar conditions in the case of yellow fever. In 1879 the sum of five hundred thousand dollars was appropriated, and placed at the disposal of the National Board of Health; and the records show that of this sum one hundred and sixty thousand dollars were employed in combating the epidemic of that year. We therefore recommend that the influence of this conference be used with the view of having appropriated by the national legislature the sum of five hundred thousand dollars, to be used, or as much thereof, as may be needful, in case of a cholera invasion, in stamping out the disease from the infected localities, and in preventing its spread from state to state.

The removal of local unsanitary conditions favorable to the development of cholera is the special work of state and local boards of health. Much has been done already in some states, but much remains which should receive immediate attention. Where it can be done, state sanitary inspectors should be appointed to visit all towns and cities specially liable to the disease, to counsel with the local authorities as to the best methods of prevention. This work should be vigorously prosecuted before the disease reaches our shores.

Advice to Citizens.—The cause of cholera is contained in the discharges from persons affected by the disease, or in things infected by such discharges. Should the disease reach our shores, the first case, and after this the first case which reaches any given community, should be strictly isolated. All infective material from these and from any subsequent cases should be destroyed in such manner as to stamp out the disease. Intelligent sanitary precautions beforehand, and scientific disinfection and treatment in the presence of the disease, should take the place of the necessary cruelties of a panic. In case any city or town is infected, the same principles of isolation should in general be applied to the city as to the infected individual. Intercourse with other cities and places should be under sanitary supervision, substantially as set forth in the rules and regulations of the National Board of Health respecting the inspection of travellers, disinfection of effects, vehicles, etc.

Health officers and inspectors appointed by state or provincial boards of health should, in addition to other sanitary work, see that the localities have set apart, erected, or planned to be so set apart or erected, structures which shall possess the sanitary requirements of an isolation hospital. But as regards

all necessary work by local boards of health, most state and provincial boards of health have printed and issued documents which give ample instruction.

Your committee recommend that when this conference adjourns it be to meet at Washington, District of Columbia, the second Wednesday in December next, and that the secretary of this conference be directed to invite the attendance at that time of the quarantine officers and the health officers of the principal cities in the United States and Canada; and that all the delegates to that meeting be prepared to report the sanitary status of their state or locality, and what steps have been taken to improve the same, and to prevent the introduction of disease.

CONDENSATIONS.

This number completes the sixth volume of *THE PHYSICIAN AND SURGEON*. The great majority of the subscriptions begin and close the year with the volumes of the journal, and if this fact is thought of by each subscriber, it will be plain that if any large number neglect to forward the subscription price of the journal, the publisher must necessarily be embarrassed in meeting the conditions of his yearly contracts. The favor that can be granted by each one in arrears by sending the amount due, will be fully appreciated by the publisher.

THERE seems to be an unfortunate relation existing in Italy between the medical profession and the public. During the epidemic of cholera in that country, sanitary officers engaged in their duties were mobbed in some of the villages, while physicians found patients who declined their attendance and refused their remedies, looking upon their acts with strong and unconcealed distrust.

A *STATUE* of Sir Erasmus Wilson, in bronze, says the *Medical Times and Gazette*, is to be erected outside of the Margate Infirmary. It will represent him clad in his robes of office, as president of the Royal College of Surgeons.

MR. WILLIAM H. VANDERBILT has made the College of Physicians and Surgeons, of New York, the munificent gift of half a million dollars. The donation is for the purchase of land and the erection of a new college building. It shows a degree of wisdom and a state of feeling on the part of the donor that commands respect and admiration. A plot of ground has been purchased on Tenth avenue between Fifty-ninth and Sixtieth streets. The site affords ample room for the erection of laboratories for practical and experimental purposes. The new building will be opposite, and the college will be run in connection with Roosevelt Hospital.

NEW PUBLICATIONS.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY.
By T. Henry Green, M. D., London, Fellow of the Royal College of Physicians, London; Physician to Charing Cross Hospital, and Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital Medical College; Senior Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Bromton. The Fifth American, from the Sixth Revised and Enlarged English Edition. One octavo volume of four hundred and eighty-one pages with one hundred and fifty engravings. Philadelphia: Henry C. Lea's Son & Co., 1884.

In comparing this edition with the revision of four years ago, it is seen that the text has been considerably changed, and that much new material has been added. The introductory chapter, from the pen of Mr. Stanley Boyde, includes a treatise on the anatomy, physiology and vital energy of the cell, and the effects of nerve influences on the life of the cell; and also some very suggestive remarks on disease. Through the body of the book the topics are more methodically arranged and the subjects carefully side-headed, which adds greatly to its facilities for reference.

Beside the great changes in the general text, by the insertion of more modern views, and the modifications of others, there is added a chapter on the "Regenerative Processes of Tissues," a second on "Septicæmia and Pyæmia," a third on "Vegetable Parasites," wholly the work of the author's colleague, Mr. Boyde.

QUIZ COMPEND OF ORGANIC AND MEDICAL CHEMISTRY, INCLUDING URINARY ANALYSIS AND THE EXAMINATION OF WATER AND FOOD. By Henry Leffmann, M. D., D. D. S., Professor of Chemistry and Metallurgy in the Pennsylvania College of Dental Surgery, and of Clinical Chemistry and Hygiene in the Philadelphia Polyclinic. Philadelphia: P. Blakiston, Son & Co., 1884. Price in cloth, \$1.00; interleaved, \$1.25.

This little volume is number ten in the Quiz Compend series of Messrs. Blakiston, Son & Co. The author's experience as a teacher qualifies him to give in a comparatively small space the essentials of much chemical knowledge. The concise manner in which the principles and facts are stated will form a great aid to the student in fixing these data in his memory.

The following synopsis of its contents will show the scope of the book: Nature of Organic Bodies; Transformation under various conditions; Organic Synthesis; Homologous and Isomeric Bodies; Empirical and Rational formulæ; Classification of organic bodies; Hydrocarbon; Derivatives of Hydrocarbons, Alcohols and Ethers; Benzenes and Turpenes; Fat Acids, Oils and Fats, Sugars, Glucosides; Cyanogen Compounds; Amines and Amides; Alkaloids; Ptomaines; Animal Chemistry. Nutrition and Assimilation; Food, Water, Air; Urinary Analysis; Index.

ELEMENTS OF PATHOLOGY. By Edward Rindfleisch, M. D., Professor of Pathological Anatomy in the University of Würzburg. Translated by William H. Mercur, M. D. Revised and edited by James Tyson, M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania. P. Blakiston, Son & Co., Philadelphia, 1884. Price, \$2.00.

This little work of nearly four hundred pages is the result of the author's efforts to lay down the elements, to mark the foundation, and to give in a book of relatively small size, the ground work of the science of pathology.

Those general perverted processes, the cause and source of all disease, are presented in so clear and simple a manner that the beginner has no difficulty in getting a correct knowledge of them. There is first considered the local outbreak of disease, inflammation and tumor formation being regarded the "initial steps." Then follows logically the extension of disease—the distribution depending on anatomical changes and functional disturbances. The classification of diseases is made from the etiological stand-point.

The author's thorough familiarity with, and clear conceptions of, his subject enables him to "fill a niche in the wants of students as well as of others who may desire to familiarize themselves with general pathological processes, viewed from the most modern stand-point." The well-known reputation of Professor Tyson as a teacher and writer, and his connection with the work as editor, is a sufficient guarantee that the American edition is as free from defect as it is possible to make a translation.

THE ANNALS OF SURGERY.

The first number of the *Annals of Surgery*, a new monthly periodical, will soon be issued. It is to be devoted exclusively to surgery and will be published simultaneously in Saint Louis, Missouri, and London, England. There being no journal of the kind published in the English language, the *Annals* will be the medium of bringing into closer relations all English-speaking surgeons, and by being published simultaneously in the United States and Great Britain, the inter-communication will be more perfectly attained.

The new fields which antiseptic methods have opened for operative surgery; the many changes which are continually being made in the science and practice; the constantly growing facilities for clinical teaching; the increase in the amount and importance of surgical literature resulting from these advances, has created a want, which the *Annals of Surgery* is designed to fill.

The chief editorial direction will be conducted by Lewis S. Pilcher, A. M., M. D., of Brooklyn, New York, who has associated with him, Mr. C. B. Keetley, F. R. C. S., of London, England. These gentlemen will be assisted by a full and able corps of

assistants, so that every department represented will receive due attention. In addition to the editorial labors of these gentlemen the journal will enjoy the advantage of the special collaboration of the following distinguished and representative surgeons, who in this practical manner demonstrate their appreciation of the importance that attaches to the institution of a journal of surgery.

Special Collaborators from the United States and Canada.—Professor W. T. Briggs, M. D., of Nashville; Professor P. S. Conner, M. D., of Cincinnati; Geo. R. Fowler, M. D., of Brooklyn; C. Fenger, M. D., of Chicago; Geo. W. Gay, M. D., of Boston; Professor F. H. Gerrish, M. D., of Portland; Professor A. G. Gerster, M. D., of New York; Professor Moses Gunn, M. D., of Chicago; Professor W. W. Keen, M. D., of Philadelphia; H. O. Marcy, M. D., of Boston; W. M. Mastin, M. D., of Mobile; C. B. Nancrede, M. D., of Philadelphia; Professor R. Park, M. D., of Buffalo; Professor T. F. Prewitt, M. D., of Saint Louis; Professor T. G. Richardson, M. D., of New Orleans; Professor John B. Roberts, M. D., of Philadelphia; Professor N. M. Shaffer, M. D., of New York; N. Senn, M. D., of Milwaukee; Professor A. J. C. Skene, M. D., of Brooklyn; Professor F. J. Shepherd, M. D., of Montreal; and Professor R. F. Weir, M. D., of New York.

Special Collaborators from Great Britain.—Professor E. H. Bennett, M. D., of Dublin; Mr. T. F. Chavasse, F. R. C. S., of Birmingham; Professor John Chiene, F. R. C. S., of Edinburgh; Mr. John Fagan, F. R. C. S., of Belfast; Mr. Jonathan Hutchinson, F. R. S., of London; Sir Joseph Lister, Bart., F. O. S., of London; William Macewen, M. D., of Glasgow; Professor John Marshall, F. R. S., of London; Professor Alex. Ogston, M. D., of Aberdeen; and Mr. H. P. Symonds, F. R. C. S., of Oxford.

Each number will contain from eighty to one hundred large octavo pages of reading matter, exclusive of advertisements, printed upon the finest paper, with large, clear type, wide margins, and with every accessory necessary to make it typographically perfect. Illustrations will be freely introduced whenever required to elucidate the text, and especial attention will be given to their character and accuracy. The form and typographical character of the journal will be such as to make its volumes especially adapted for preservation for future reference, thus making it a lasting record of contemporary surgery and an invaluable part of the library of every working surgeon.

All communications pertaining to the editorial management of the journal, including, *Contributions, Exchanges, and Books for Review*, should be sent directly to the editor, number 4, Monroe street, Brooklyn, New York, *except* in case of communications from Great Britain, which should be sent to Mr. C. B. Keetley, F. R. C. S., number 20, Princes street, Hanover Square, W. London.

The subscription price, when paid in advance, will be, for

one year, five dollars, which, with all other communications pertaining to the *business* department of the journal, should be addressed to the publishers, J. H. Chambers & Co., Saint Louis, Missouri, or to Smith, Elder & Co., London, England.

COURIER-REVIEW CALL-BOOK. A physicians' pocket reference book and visiting list, arranged and prepared by E. M. Nelson, M. D., Ph. D., editor *Saint Louis Courier of Medicine*; Physician to Saint Louis Protestant Hospital; Late Physician to Saint Louis Maternity Hospital, etc. J. H. Chambers & Co., Saint Louis, Missouri; Chicago, Illinois; Atlanta, Georgia.

The editor of this book of reference and visiting lists, has gathered into a small compass much matter that will be for every-day use, as well as for occasional emergencies which the practitioner may encounter. The text of the reference and the blank leaves are very conveniently arranged. The range of the book can be judged from the table of contents as follows: Almanac; table of signs; number of drops in a fluid drain of various fluids; diet table for diabetics; doses for inhalation; prediction of the day of confinement; comparison of thermometric scales; metric system; doses of medicine for children; formulæ and doses of hypodermic injections; artificial respiration; care of galvanic battery; disinfectants; clinical examination of urine, physical qualities, etc.; poisoning, treatment; diagnostic table of eruptive fevers; posological tables; blank leaves for visiting list; obstetric record; vaccination record; death record; nurses' addresses; accounts rendered; cash received; articles loaned; general memoranda.

BOOKS AND PAMPHLETS RECEIVED.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY FOR THE YEAR 1884, held in Power's Opera House, Grand Rapids, June 11 and 12. Lansing: W. S. George & Co.

THE RELATIONS OF MICRO-ORGANISMS TO SURGICAL LESIONS. By Henry O. Marcy, A. M., M. D., of Boston. Read before the section of surgery and anatomy of the American Medical Association, May, 1884. Reprinted from the *Journal of the American Medical Association*, November 1, 1884. Chicago: *Review Printing Co.*

SYLLABUS OF LECTURES AND QUESTIONS ON ODONTOLOGY, HUMAN AND COMPARATIVE, FOR THE USE OF STUDENTS IN THE DENTAL COLLEGE OF THE UNIVERSITY OF MICHIGAN. By Corydon L. Ford, M. D., D. D. S., Professor of Anatomy and Physiology in the University. Ann Arbor: *Register Printing House*, 1884.

THE PHYSICIANS' POCKET DAY-BOOK. Designed by C. Henri Leonard, M. A., M. D., Professor of Medical and Surgical Diseases of Women, and Clinical Gynæcology in the Michigan College of Medicine, member of the American Medical Association. Price, \$1.00; name and year on the side in gold leaf, \$1.25; name, town, state and year, \$1.50. Detroit, Michigan: *The Illustrated Medical Journal Co.*

MEDICAL DIGEST.

CIRCULATION OF BLOOD CORPUSCLES.

Dr. G. J. Hamilton has made an examination of the physical conditions which affect the movement of solid bodies suspended in a circulating fluid with reference to the analogous case of the blood corpuscles in the living body, and his results are full of suggestiveness in the explanation of many obscure phenomena of pathology. The blood corpuscles are solid bodies suspended in a liquid plasma; the red corpuscles outnumber the white about three hundred or four hundred to one. It was the aim of the author to determine the relation between the specific gravity of the corpuscles (with respect to that of the plasma) and the circulation of the blood. A stream of water was allowed to flow through a horizontal tube several feet in length, and little balls or disks of wax and other substances of various sizes and specific gravities were dropped into the current and carried along by it. In this simple scheme of the circulation it was found that the balls or disks when specifically lighter or heavier than the fluid were carried along the sides of the tube, in the former case against the upper and in the latter against the lower side. Friction on the tube wall retarded the motion and gave a rotating movement to the solid bodies which tended to accumulate and clog the bore of the tube.

When the balls were of the same specific gravity as water they were swept along the middle of the tube and remained always in the "axial" or swiftest moving central current without touching the sides. In the normal circulation of the frog it can be shown that the white corpuscles pass along the upper wall of the blood-vessel with a rotating motion. In order to make this observation the vessel observed must lie in a horizontal position while the web or sheet of tissue holding it is in a vertical plane. When the blood-vessel twists so that what was once the upper side becomes the under, the white corpuscle, carried on by the current, gradually crosses the stream and reaches the new top wall. These facts are easily explained when it is considered that the white corpuscles are specifically lighter than the blood plasma. The red blood corpuscles move in a crowd, without rotation, away from the vessel wall, in the so-called axial current, which is more marked the more rapid the circulation.

The red corpuscles are specifically scarcely heavier than the plasma, while the white are considerably lighter. The author points out the evident conclusion from his experiments, that the relation between the specific gravities of red corpuscles and plasma must remain during health in very fine adjustment. For were the red corpuscles to become decidedly either specif-

ically lighter or heavier than the plasma, they must crowd against the vessel walls and the frictional resistance thus offered to the circulation might readily exceed the power of the heart to overcome.

It does not seem improbable that a disturbance of the specific gravity of the blood plasma in extensive albuminuria is the direct cause of the inflammations of different kinds, such as pleurisy, pneumonia, etc., to which there is a great tendency in that disorder. The tendency to hypertrophy in the left ventricle of the heart, and to general dropsy, may be explained in the same way.

In Asiatic cholera the water is rapidly drained from the blood, and the speedy collapse may have its solution in the clogging of the blood-vessels with corpuscles that are crowded against their walls.—*Journal of Physiology*, Volume V, page 66, 1884.—*American Naturalist*.

THE PHYSIOLOGY OF RUMINATION.

As is well known, the stomach of a ruminant animal is a complex organ consisting of four distinct chambers. Of these, the last, that opening directly into the intestine, corresponds functionally to the single stomach of other vertebrates, the other chambers of the herbivorous stomach probably only being concerned in the preparation of food preliminary to digestion. The feeding of ruminants is characterized by the fact that the food when first swallowed passes only as far as the first and largest division of the stomach, the paunch, where enormous quantities may be laid up. When the animal has ceased feeding it seeks a position of rest and then begins a regurgitation by piecemeal of food from the paunch into the mouth, where it is thoroughly masticated, "chewing the cud," after which it is swallowed into the "fourth stomach" for final digestion. It is this process of rumination which Professor Luchsinger has recently studied in the goat.

Attention is called to the fact that the act of rumination is interrupted if the animal is disturbed in the slightest degree. The goats experimented on were narcotized with morphia, which numbs painful sensations but interferes little with reflex action. After appropriate operations, the author was enabled to assure himself that pressure with the hand upon the wall of the paunch brought about in perfectly normal manner the act of rumination. There was first a movement of the vocal cords tending to close the glottis, then the diaphragm contracted so as to press upon the upper surface of the stomach, and at the same time the abdominal walls contracted energetically; a morsel of food was thus thrown up rapidly into the mouth, any excess of water in it being pressed out and swallowed; then began a long series of cud-chewing movements, at the beginning of which

occurred a copious flow of saliva into the mouth; finally, with a swallowing movement the mouth was emptied and the masticated morsel sent back for its complete digestion. The amount of food regurgitated was determined by the sphincter muscles at the cardiac opening of the paunch, these muscles relaxing at the beginning of the act but closing finally again when a small amount of food had been forced out. The whole series of movements was readily brought about by electrical stimulation of the wall of the paunch, or when this was mechanically excited by distention with warm water or by pressure with the hand. Strange to say, the flow of saliva and the chewing movements followed in regular order expulsion of food from the paunch, though the morsel was not, in some cases, allowed to enter the mouth, but was expelled lower down from the divided œsophagus. This artificially excited act of rumination could only be provoked when the pneumogastric nerves were intact.

Luchsinger concludes that rumination is a complex reflex action, the stimulus to which is the distension of the walls of the paunch by the accumulated food matter, the amount of pressure upon the wall being also, no doubt, regulated by the motor nerves of the stomach. The afferent nerves concerned in the reflex are probably the vagi, and these call into co-ordinated action a number of correlated nerve centers governing salivation, mastication and movements of the vocal and swallowing apparatus.—*Pflüger's Arch.*, 1884, Band XXXIV, Seite 293.—*American Naturalist*.

KOCH ON THE CHOLERA BACILLUS.

Those who study the patient work of Koch relative to the cholera bacillus cannot avoid feeling the binding cord of conviction forcing their judgment to yield to his statement of the case. At the close of that part of his discussion before the Imperial German Board of Health, he says: "As far as I am myself concerned, the matter is clear that the comma-bacilli are the cause of cholera."

The following description of the patient manner in which he investigated the possibility of infecting the lower animals with the microbe, and his deductions from the failures will serve as a further testimony to the efficiency with which he disposes of a subject which he takes in hand. He continues:

"Now it can certainly be demanded that if this be the case, (that the comma-bacilli are the cause of cholera), further proofs should be brought in support of it, and above all, that the cholera process should be produced experimentally by means of the comma-bacilli. Every imaginable effort has therefore been made to meet this demand. The only possible way of giving such a direct proof of the cholera-producing effect of comma-bacilli is to make experiments on animals, which, if we are to

THE PHYSIOLOGY OF RUMINATION.

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The following description of the patient manner in which he investigated the possibility of infecting the lower animals with the microbe, and his deductions from the failures will serve as a further testimony to the efficiency with which he disposes of a subject which he takes in hand. He continues:

"Now it can be demanded that if this be the case, the comma-bacilli are the cause of cholera. Further proof must be brought forward to support of this statement. I have already mentioned that I have tried to infect various animals with the comma-bacilli, but have not been able to do so. The result of these experiments is that the comma-bacilli are not the cause of cholera. I have also tried to infect various animals with the comma-bacilli, but have not been able to do so. The result of these experiments is that the comma-bacilli are not the cause of cholera. I have also tried to infect various animals with the comma-bacilli, but have not been able to do so. The result of these experiments is that the comma-bacilli are not the cause of cholera."

believe the statements of writers on the subject, can be done without any difficulty. It has been said that cases of cholera occurred amongst cows, dogs, poultry, elephants, cats and several other animals; but on closer examination these statements are found to be quite unreliable. As yet we have no certain instance of animals falling spontaneously ill of cholera in periods of cholera. All experiments also, which have hitherto been made on animals with cholera substances, have either a negative result, or, if they were said to give a positive result, they were not sufficiently supported by evidence, or were disputed by other experimenters. We occupied ourselves, nevertheless, in the most careful and detailed manner, with experiments on animals. Because great value must be laid on the results on white mice obtained by Thiersch, I took fifty white mice with me from Berlin, and made all kinds of experiments on them, at first feeding them on the dejecta of cholera patients and the contents of the intestine of cholera corpses. We followed Thiersch's rules as accurately as possible, not only feeding them with fresh material, but also with the same food after the fluids had begun to decompose. Although these experiments were constantly repeated with material from fresh cholera cases, our mice remained healthy. We then made experiments on monkeys, cats, poultry, dogs and various other animals that we were able to get hold of; but we were never able to arrive at anything in animals similar to the cholera process. In precisely the same manner we made experiments with the cultivation of comma-bacilli; these were also given as food in all stages of development. When experiments were made by feeding the animals with large quantities of comma-bacilli, on killing them and examining the contents of their stomachs and intestines with a view to find comma-bacilli, it was seen that the comma-bacilli had already perished in the stomach, and usually had not reached the intestinal canal. Other bacteria are different in this respect, for a beautifully red-colored micrococcus was found accidentally at Calcutta, which was easily recognized by its striking color, and was therefore especially suitable for such an experiment. This micrococcus was, at my request, given by Dr. Barclay, of Calcutta, to mice as food, and the contents of the intestines of these animals were placed upon potatoes. The red colonies of the micrococcus again formed; they had thus passed the stomach of the mouse uninjured. We were forced to conclude from this that the failure of these experiments by feeding the animals was due to this property of the comma bacilli. The experiment was therefore modified by introducing the substances direct into the intestines of the animals. The belly was opened and the liquid injected immediately into the small intestine with a Pravoz's syringe. The animals bore this very well, but it did not make them ill. We also tried to bring the cholera-

dejecta as high as possible into the intestines of the monkeys by means of a long catheter. This succeeded very well, but the animals did not suffer from it. I must also mention that purgatives were previously administered to the animals in order to put the intestines into a state of irritability, and then the infecting substance was given, without obtaining any different result. The only experiment in which the comma-bacilli exhibited a pathogenic effect, which therefore gave hope at first that we should arrive at some result, was that in which the pure cultivations were injected directly into the blood-vessels of rabbits, or into the abdominal cavity of mice. Rabbits seemed very ill after the injection, but recovered in a few days. Mice, on the contrary, died from twenty-four to forty-eight hours after the injection, and comma-bacilli were found on their blood.

"Of course, they must be administered to animals in large quantities; and it is not the same as in other experiments connected with the infection, where the smallest quantities of infectious matter are used, and yet an effect is produced. In order to arrive at certainty whether animals can be infected with cholera, I made inquiries everywhere in India whether similar diseases had ever been remarked in India amongst animals. In Bengal I was assured that such phenomena had never occurred. This province is extremely thickly populated, and there are many kinds of animals there which live together with human beings. One would suppose, then, that in this country, where cholera exists in all parts of it continuously, animals must often receive into their digestive canal the infectious matter of cholera, and, indeed, in just as effective a state as human beings, but no case of an animal having an attack of cholera has ever been observed there. Hence I think that all the animals on which we can make experiments, and all those too, which come into contact with human beings are not liable to cholera, and that a real cholera-process cannot be artificially produced in them. We must, therefore, dispense with them as a material for affording proofs.

"But with this I do not by any means intend to say that no proof at all can be brought of the pathogenic action of comma-bacilli. I have already explained to you, that, for my own part, I can form no other idea, even without these experiments on animals, than that a connection exists between the comma-bacilli and the cholera-process. Should it prove possible later on to produce anything similar to cholera in animals, that would not, for me, prove anything more than the facts which we now have before us. Besides, we know of other diseases which cannot be transferred to animals, for example, leprosy; and yet we must admit from all that we know of leprosy-bacilli, that they are the cause of the disease. For this disease, also, we must dispense with experiments on animals, because as yet no species of animals has been found susceptible to leprosy. It is

probably the same with enteric fever; I do not know that any one has ever succeeded in infecting animals with it. We must be satisfied with the fact that we verify the constant presence of a particular kind of bacteria in the disease in question and the absence of the same bacteria in other diseases. The bacteria in question must always coincide exactly with the infectious principle of this particular disease, and to this point I attach great value; the presence of pathogenic bacteria must be one corresponding to the pathological transformations in the body, and to the course of the disease. On the other hand, we know of diseases of animals, also, which cannot be transferred to human beings; for example, rinderpest and pneumonia of cattle. We meet here with a phenomenon widely spread in nature. Almost all parasites are restricted to one or very few species of animals, which act as their host. I remind you of tape-worms; many kinds of animals have their own special tape-worm, which can only develop in one species of animal, and in no other.”
—*Weekly Medical Review*.

A NEW EXPLANATION OF THE PROCESS OF INFLAMMATION.

In the last number of the *Quarterly Journal of Microscopical Science* there is a translation of Dr. Elias Metschnikoff's paper "On the Mesodermic Phagocytes of certain Vertebrates," originally published in the *Biologischer Centralblatt*. Metschnikoff has shown elsewhere that certain amoeboid cells in the tissues of the invertebrates have the power of ingesting and absorbing food particles. On experimenting with vertebrates, he found that the connective tissue cells had the same power, and that, in a batrachian larva about to metamorphose, the absorption of the tail was brought about by these cells, which he terms "phagocytes." At the beginning of the metamorphosis these amoeboid connective-tissue cells collect round the muscles of the tail, and gradually devour their fibers. The fragments of muscle retain their structure for some time after ingestion, so that that process can be readily seen to take place, but gradually lose their striation and break up into rounded strongly refracting globules. In order to ascertain whether these "phagocytes" would absorb, and so eliminate from the system injurious substances, Metschnikoff injected putrescent blood, so as to induce septicemia. In a short time the white blood corpuscles (which are also included in the term "phagocytes,") were seen to contain both still and motile bacteria, and these organisms were especially abundant in the "hæmophagocytes" or white blood corpuscles of the spleen. This fact, taken together with the probability that the spleen has no very important physiological function, since animals live without much apparent discomfort after its complete excision, seems to indicate a prophylactic function for the spleen, it being merely a protec-

tion against septic bodies such as bacteria, the removal of which from the body is its function.

To apply these facts to the process of inflammation. When inflammation was induced in the tail of a newt, the first phenomenon was the collection of connective-tissue "phagocytes" round the injured cells, followed by the passage of "hæmophagocytes" or white blood corpuscles through the walls of neighboring capillaries, both collecting apparently for the purpose of devouring and so removing the ruptured, dead and dying cells.

In fact the essence of the whole inflammatory process may be said to be a conflict between the "phagocytes" and the septic material, whether the latter be a dead or dying cell, bacteria or other foreign body. In the invertebrates, where connective-tissue cells are abundant, the vascular system does not participate in the process, only doing so among vertebrates, where the extra-vascular "phagocytes" are not sufficiently numerous to combat the injurious structures, a call for assistance being then given to the "hæmophagocytes." The first effect of irritation is on the connective-tissue "phagocytes," the changes produced in them subsequently influencing the capillary walls, and allowing the transit of the white corpuscles.

The theory has much to recommend it, being founded on logical, *a priori* grounds, and affording simple explanations for many obscure points in connection with inflammation. For instance, it affords a simple explanation for the presence of the large numbers of connective-tissue and white blood corpuscles that have been observed in induced keratitis, and also it explains how in certain epidemic fevers—famine-fever for instance—numerous sprilla, etc., can exist in the blood of as yet unaffected individuals, without causing any symptoms of the epidemic. At the same time the theory is quite compatible with all definitely ascertained pathological facts, a circumstance which alone would give it considerable weight.—Professor McMurrich, in *Canada Lancet*, May, 1884.

HOMŒOPATHY.

In answer to a correspondent who had proposed a test of homœopathy in one of the London hospitals, the *Lancet* says: Our correspondent does not seem to be aware that homœopathy scarcely exists as understood by Hahnemann. Its most popular exponent in London has published a new doctrine of therapeutics, directly contradicting Hahnemann's fundamental principle. We published last week the suggestion of a Hahnemannian journal to drop the word "homœopathy" out of existence, as the only means of averting the imminent dissolution of the school. We are quite aware that there is a section of the public who believe in homœopathy; but they are attended by those who have abandoned all its essential principles while still

retaining the name. The argument that homœopathy only needs a trial is quite untenable. It has been on its trial eighty years—as long, in fact, as vaccination. While vaccination is accepted by the whole world of science and rational men, homœopathy is without a chair in any university of Europe, and it is proposed by its own leaders to drop the very name. The attitude of scientific medicine to it, *ab initio*, is thus thoroughly justified. The attempt to take shelter under the name of Dr. Sidney Ringer is now rather a favorite device for homœopaths, but it will not save either their scientific or their moral position. Dr. Sidney Ringer takes medicines as he finds them, and investigates their action in health and disease, unhampered by authority, and he does not trade on a name.—*New York Medical Journal*.

THE VALUE OF IODOFORM IN WOUNDS OF CAVITIES LINED WITH MUCOUS MEMBRANE.

Professor Mikuloz, of Krakow, read a paper on this subject at the Copenhagen Congress. He said that the former methods of treatment of operation wounds of the oral, nasal, and pharyngeal cavities, of the rectum, vagina, bladder and urethra, were for the most part very complicated, very troublesome for the patient, and altogether very uncertain. The relatively best of them, continual irrigation, was quite complicated and could not be used in all cases. An exact antiseptic dressing, and one that could be left in place, was not possible in the majority of these wounds; and therefore the results of most of the operations on these cavities were uncertain, since an unfortunate termination was often due, in these cases, to septic processes, as phlegmon, diphtheritic deposit in the wound, pneumonia, septicæmia or pyæmia. Even in a favorable process, there was generally extensive suppuration. The former course of wounds resulting from extirpation of the tongue, resection of the lower jaw, pharyngotomy, œsophagotomy and extirpation of the larynx, and from extirpation of rectum and uterus, and plastic operations on the bladder and urethra are well-known.

It was on the introduction of iodoform that all these wounds first became accessible to an exact method of antiseptics; and by it the treatment is in the greatest degree simplified, rendered painless for the patient and everywhere applicable. It simply consists in filling the whole wound with thirty to fifty per cent. iodoform gauze. When care is taken that the gauze lies everywhere in the wound, completely filling all the pouches and sinuses, it may be left, even in the oral cavity, for six or ten days. It is not in the slightest degree irritable to the wound, and keeps it completely antiseptic, even when the saliva and mucus, the

urine or feces pass over it. The secretion is slight and generally entirely odorless. No inflammatory swelling, no extensive suppuration, no pain, and no fever beyond an antiseptic rise of temperature is seen, as with wounds treated by other methods. It goes without saying that the operation itself must be performed with usual antiseptic precautions.

Separate drainage of a wound packed with iodoform gauze is unnecessary and superfluous; as is all further after-treatment. The gauze is left until it comes out or is taken out in six or ten days (ten days for deep wounds of the rectum and vagina), and replaced by fresh gauze. As soon as the wound granulates cleanly, the gauze is discontinued. Dusting with iodoform or rubbing it in is entirely superfluous, and incurs the danger of iodoform intoxication. With iodoform gauze alone, and in small and moderate-sized wounds Mikuliez has never seen symptoms of iodoform-poisoning. In large wounds, as after extensive extirpation of the rectum, the pulse may go up to 120 or 140, and the patient may feel ill and vomit. If these symptoms appear on the second or third day, and last longer than forty-eight hours, the gauze must be removed and made weaker, or another antiseptic dressing be substituted. Mikuliez has never seen a severe case of iodoform intoxication in wounds of this kind. His experience now extends over more than one hundred and fifty cases, which ran a favorable course, including extirpation of the tongue, rectum, and uterus, and resections of the pharynx, larynx, and œsophagus.

LEAD PARALYSIS (SUBACUTE MYELITIS?)

Two brothers, seven and five years of age, the sons of a painter, were attacked with lead-colic a week after the room in which they remained during the day-time had been painted. Soon after the abdominal symptoms they suffered from pain in the legs; at the end of four weeks they could hardly walk, and, shortly after, the paralysis became complete. They improved for a short time and then relapsed. Five months after the first abdominal symptoms they came under observation. The elder boy had the "blue line" on the gum and "wrist drop," and could walk with difficulty. In the other there was an absence of the "blue line" and the upper extremities were unaffected. They improved slowly for some weeks, and were then lost sight of until nearly a year subsequently, when they were found worse than before. During the interval they had improved and then relapsed. At present, with somewhat atrophied lower extremities, they bore a close resemblance to the common spinal paralysis of infancy and early childhood.

A boy, two years and three months of age, who had cellulitis of the thumb and hand, which had been opened freely and a poultice ordered, was seen by another physician who pre-

scribed a solution of lead (two drachms to one pint). In a week's time the child was brought back with the lower extremities paralyzed. He got well under treatment.

Seeligmuller quotes Duchene (*filis*) as having seen a child of three years who suffered from spinal paralysis from drinking water contaminated with lead.

Dr. W. R. Birdsall reported a case of lead paralysis where the autopsy showed subacute myelitis. He also collected the records of fourteen cases in which subacute myelitis was found.

Dr. Seguin reported a case in which the symptoms of lead paralysis were absolutely identical with those of polio-myelitis. Other facts are stated which go to show that lead paralysis is an affection of the spinal cord.—Dr. H. D. Chapin in *New York Medical Record*.

HÆMORRHOIDS.

The treatment of hæmorrhoids constitutes no inconsiderable item in the general practitioner's work, and those who hesitate to inject the mass with the various proportions of glycerine and carbolic acid for fear of embolism, or who do not like to resort to the actual cautery, or the burning nitric acid, will welcome the results of the plan recommended by M. Verneuil. Before making the quotation, which comes from the *Medical Age*, we call attention to the necessity for uncomplicated measures both in pharmacy and surgery. In all cases where the hæmorrhoids are either injected with carbolic acid, or subjected to actual cautery, or touched with burning nitric acid, the sphincter is previously stretched, and whilst the advantage has been hitherto attributed to the acid or the heat, we now receive the assurance that the stretching of the sphincter is all that is required.

"M. Charles Monod has written to the *Gazette des Hôpitaux*, an article on a new treatment of strangulated hæmorrhoids which he has put into practice with the greatest success. This treatment consists in forcibly dilating the anus, as in case of fissure. M. Verneuil has already recommended this method for the cure of simple piles, and has been followed by most of the young surgeons, who have entirely abandoned every other treatment. To effect the dilatation M. Verneuil employed specula of different dimensions, and only in the case, as has been just stated, of the ordinary condition of hæmorrhoids. On the contrary, he says that 'when the piles are the seat of sphacelus he always waited until the complication disappeared.'

"M. Monod, who has imitated M. Verneuil with the best results in these simple cases, goes still further, and instead of regarding strangulation as a counter-indication to the operation, considers that this fact renders it the more necessary. He cites a case in point. He was called by one of his confreres to see a

gentleman who had been suffering excruciating agony for two days from strangulated piles, and on whom ice fomentations, narcotics, intus and extra were tried without effect. Local examination showed no more than is ordinary in such cases—a ring of tumefied external hæmorrhoids, with a dark spot in the centre, announcing the commencing of sphacelus. The least touch was painful, and the patient demanded relief at any price. Partisan of the treatment of hæmorrhoids in general by dilatation, he thought that he would be doing right in employing it in the present case, knowing that by suppressing the general action of the sphincter the pain would cease. Accordingly, the patient was put under the influence of chloroform, and the hæmorrhoidal tumors reduced, and M. Monod largely dilated the anus with his fingers. A few minutes afterwards the patient awoke free from all pain, and in a few days he had the satisfaction of not only feeling that the strangulation had entirely disappeared, but that he was forever quit of the piles. This case of Monod's proves that the hand dilates just as well as the speculum, and consequently the operation is reduced to its simplest expression."—*Weekly Medical Review*.

USE OF COCA IN THE TREATMENT OF INEBRIETY.

For the relief of the profound exhaustion and neurasthenia which come on after the removal of alcohol in the treatment of the inebriate, the use of coca is highly recommended in the *Journal of Inebriety*. The author summarizes the results of its use as follows:

(1) After the removal of alcohol, coca given in doses of from one-half to one ounce every four hours was speedily followed by the most characteristic symptoms of improvement.

(2) Its action on the brain and nervous system was that of an exhilarant and slight narcotic, relieving depressions and lessening irritable nerve conditions. In cases of organic and functional lesions of the heart, an increased steadiness of pulse beat and diminution of pulse irritability were apparent.

(3) The psychological depressions and neuralgias so common in this stage were lessened, and disappeared altogether in most cases, especially for some time after the use of the drug.

(4) Both the appetite and sleep, in all cases where it was given freely, improved rapidly, and the future of these cases seemed to have less complications and more positive recoveries.

(5) No evidence was brought out that would indicate it destroyed the cravings for alcohol in cases of dipsomania; but it was clear that given freely in these cases it lessened the intensity and duration of the attack. The conclusion which was indicated by this study was, that coca was a tonic of great value in inebriety, and more clearly a specific than any other remedy now known.

BLOOD-LETTING IN THE TREATMENT OF SEXUAL DISORDERS.

In the *Practitioner* for February, 1884, Dr. Alexander Harkin claims to have obtained immediate and permanent results from blood-letting, or cupping, over the occipital region in various functional disturbances of the generative apparatus. In spinal neurasthenia following masturbation, in seminal losses due to other causes, in irritability of the bladder without actual catarrh, and in similar disorders, he extols the salutary influence of this topical remedy. He argues that most of these pathological states are to be regarded as true neuroses, depending largely upon a hyperæmic condition of the medulla oblongata. In the milder cases he relies very much on the effects of bromide of potassium and the extract of belladonna, with cold douches to the nape. Before proceeding to wet cupping, which in every case it is not convenient to adopt, he tries the effects of dry cupping frequently repeated, or of a blister, "nuchæ collis."—*Medical Record*.

 SUICIDES.

No one can fail to be struck by the apparently increasing number of suicides. It may be that the total percentage of these distressing deaths upon the increment of the population has not increased, but it is beyond question that suicide, as a social calamity, has been thrust on our notice of late more than in remoter years. Until the statistical facts are made clear it would be idle to speculate as to the probable cause of this increase, if there be one. It is, however, not merely permissible, but politic, to bestow a passing glance on the subject as a whole. Suicides may be divided roughly into two great classes: Those in which the self-slayers are intentionally conscious of what they are doing, and those in which they are either unconscious of their acts or perform them under distinct hallucinations or delusions of idea. This last class—which if not technically definitive will serve for our immediate purpose—is not, we think, a large one. Without hair-splitting, it may roughly be said that the great majority of those who kill, or try to kill, themselves in these modern times, and in civilized communities, are perfectly well aware of the nature of the act they are performing or attempting, and do the deed with a, so far, intelligent purpose of escaping from misery which seems unendurable, or because of some terror or shame that for the time overwhelms them. The law is mercifully interpreted for the sake of survivors; but, as a matter of fact, scarcely one in a hundred of the so-called cases of "temporary insanity" are correctly so described. It is heart-breaking or brain-tearing trouble that makes men and women long to die or impetuously seek refuge in death, either in the belief that in dying they will

sleep or that consciousness will end in eternal oblivion. We do not say that there is a clearly defined process of reasoning in all these cases, though in the majority we believe there is; but in very few instances indeed is the real inner feeling one which differs greatly from the yearning to escape—anywhere, anywhere out of this misery. The rate at which men and women live now-a-days has something to do with this feeling. Boys and girls are men and women in their acquaintance with, and experience of, life and its so-called pleasures and sorrows, at an age when our grandparents were innocent children in the nursery. The young men are blasé at two or three-and-twenty, the young women ennuyée. Life is played out before its meridian is reached, or the burden of responsibility is thrust upon the consciousness at a period when the mind cannot, in the nature of things, be competent to cope with its weight and attendant difficulties. All this has been said before. There is not a new word or a new thought in it, and yet it is a very terrible and pressing subject. We cannot give it the go-by. "Forced" education, commenced too early in life and pressed on too fast is helping to make existence increasingly difficult. We are running the two-year-old colts in a crippling race, and ruining the stock. If able and impartial observers would make it their business to ascertain the facts about suicide, they would be doing a good and useful work. We believe, not without some data upon which to base our speculations, that suicide is increasing, and that the active cause of the evil is mind-weakness, the result of forced development and premature responsibility. Hasty and too early marriages, too anxious struggles for success in life, too hazardous ventures in business enterprise, the rush of undisciplined and untrained minds into the arena of intellectual strife, and, above all, that swinging of the self-consciousness—pendulum-like—between excess in rigor of self-control and untempered license, which constitutes the inner experience of too many, are proximate causes of the breakdown or agony of distress which ends in suicide. The underlying cause is impatience, social, domestic and personal, of the period of preparation which nature has ordained to stand on the threshold of life, but which the haste of "progress" treats as delay. It is not delay, but development; albeit this is a lesson rash energy has yet to learn from sober science.—*Lancet*.

PRUSSIC ACID AN ANTIDOTE FOR STRYCHNINE.

A correspondent of the *British Medical Journal* writes thus of antagonism of strychnia and prussic acid: Some years since it became necessary to destroy an old dog. A large dose of strychnine was administered in bread, but the poison did not act very rapidly, and as the animal's struggles and pain were distressing to watch, some hydrocyanic acid was poured in his

mouth to complete the poisoning and hasten his end. To our surprise the animal at once improved and eventually recovered. I had forgotten this until the other day when one of our cats was found dead in the garden, and the other dying, with all the symptoms of strychnine poisoning, namely, constant tetanic spasms and dilatation of the pupils and insensibility to light. The cat was held firmly and three or four drops of hydrocyanic acid placed carefully on her tongue. An improvement was shortly visible, the pupils of the eyes became normal, the convulsions became less and less severe, and in a few hours the cat was all right again. I would add that the cat was nursing a kitten, which apparently suffered no inconvenience from the poison.—*Boston Medical and Surgical Journal*.

CIVILIZATION AND THE TEETH.

If the fully-evolved man of the future is to be, as has been prophesied, a hairless individual, he is only too likely to be—excepting his indebtedness to the manufacturing dentist—a toothless mortal also; for which result a persistent preference for ornament over use must be mainly held responsible.

If Helen of Troy possessed teeth as good as those of her Britannic contemporaries, she had probably as square a jaw, and a mouth of equally capable dimensions. One item in the civilized ideal of female beauty, the rose-bud mouth to wit, is undoubtedly accountable for a great deal of the crowding and consequent injury of the teeth especially observable in patients of the upper and middle classes, while the frequent decay of the back teeth even before the marriageable age is reached, and the persistence of the visible front teeth till shortly after that age would seem to show that natural selection has some of the infirmities not usually associated with abstractions, and that “out of sight” is even for it “out of mind.”

Certain of the luxuries of modern life, and the operation of some of its so called duties, aid in completing that destructive effect against which, curiously enough, another outcome of the civilizing process—inherited gout—alone seems able to oppose its recognized attributes of large, regular, strong, and well-enameled teeth.

In the case of the negroes of the Southern states of America, a remarkable dental degeneration seems to have attended the changes in food and habits which followed the abolition of slavery. Formerly the slaves lived chiefly on corn-meal and meat; at breakfast, coffee, and with dinner, vegetables were taken in addition. Occasionally wheat-flour took the place of corn (maize), but it was ground on the plantation and not bolted. This food served at regular hours, and combined with plenty of fresh air, exercise, and sleep, made the teeth strong and hard. Now the negroes eat fine wheat-flour bread, spend a

large part of their wages in sweet-meats, eat at irregular times, and sleep too little.

The other side of the story is presented in a paper recently published by Dr. Kirk, who has under his care, in the Pennsylvania Institute for Deaf and Dumb, the teeth of some four hundred children. By the time that the children have been a year in this institution an entire change is noticed in the character of their teeth; they have become so hard that the instruments must be retempered in order to cut the dentine in preparing the cavities for filling; they become more firmly implanted in their sockets, and extraction is thus rendered difficult; several cases of the spontaneous arrest of caries, and of the new formation of dentine have been observed. These favorable changes are attributed to the dietary, which consists largely of various preparations rich in bone-forming materials, such as maize, oats, and wheat, from which the layer just beneath the siliceous coating has not been removed in milling, together with a liberal supply of milk and a limited amount of sugar.

Another important but only lately recognized cause of dental decay, is the undue exaction of nervous energy—probably often combined with insufficient or improper alimentation.

Recent observations have shown that carious teeth are common in modern schools in proportion to the educational standard adopted; and that the children in the higher forms have—out of all proportion to their more advanced age—worse teeth than those below them; while caries has not infrequently been noticed to commence suddenly, or to extend rapidly, during the period of examination strain. The greater work imposed upon the cerebral and other nervous centres is supposed to divert a portion of the phosphates and other mineral constituents which ought, by rights, to be devoted to the nourishment and growth of the dental structures; and it is not improbable that the secretion of the buccal glands and mucous membrane is modified under the influence of mental exertion to the deterioration of the teeth.—*Medical Times*.

MISCELLANEOUS ITEMS.

TANNIN IN CARBUNCLE.—Dr. R. H. Johnson (*Medical Review*) has found tannin a specific for carbuncle. The dry powder is sprinkled on the carbuncles as long as it will dissolve. Twenty-four hours after it is washed off with castile soap and the sprinkling of tannin recommenced. The carbuncle soon heals up, he claims, without much pain.

ERGOT IN THE TREATMENT OF CONSTIPATION.—Dr. Grangir reports two cases of constipation following the abuse of pur-

gatives, relieved by ergot. Three doses of ten grains each were given at intervals of two hours and more, followed by copious evacuations. A second stool occurred spontaneously the next day, and after the administration of ergot in smaller doses for a few days a definite cure was obtained. The constipation was due to atony of the muscular wall of the intestines.—*Algemeine Medical Central Zeitung*.

WATER AND CONSTIPATION.—Dr. Squibb, in his last *Ephemeris*, has a suggestive article on constipation. He thinks that most constipations are due to insufficient water in the faecal mass. The individual does not ingest enough water to supply the blood with its seventy-nine per cent, therefore the blood absorbs it from the intestinal contents. "Drink water" is Dr. Squibb's motto. It is a good one, but water, as every one knows, will not cure habitual constipation in a very large percentage of cases.

ABSORBENT TOW.—Signor Silvio Plevani, Director, in a paper recently published (*Gazetta degli Ospitali*) states that tow, which is a very cheap residual material, can be used for all surgical purposes instead of absorbent cotton, when prepared according to the following directions: Boil the tow for some time in lye made of wood ashes, or with a ten per cent solution of carbonate of sodium, then wash it repeatedly in water. The tow thus deprived of its grease is immersed in a ten per cent solution of chloride of lime, and kept in it some hours, with occasional stirring, until it has become perfectly white. It is then washed thoroughly in pure water, until the liquid squeezed from it is perfectly limpid; drying and carding complete the process.—*Lancet*.

COLD WATER TREATMENT OF TYPHOID FEVER.—Professor Heubner, of Leipzig, describes his mode of carrying out the hydrotherapy of typhoid fever. He uses baths, not only or even chiefly on account of the high temperature, but also for their reflex action on the vessels of the skin, for which purpose they must sometimes be lukewarm or even warmer. For young and robust patients he often orders cold baths, often lasting from fifteen to twenty minutes; but when the temperature is low, or the patient either a child or an aged individual, a warmer bath is necessary, followed, however, in all cases by cold affusions over the head and neck. He never disturbs his patients when asleep in order to give a bath. He concludes his article by recommending small doses of calomel to be given early in the illness, as, in the form of corrosive sublimate, into which it is changed as it passes through the organism, it will act antiseptically on the materies morbi.—*Wiener Medical Blätter*.

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